



State of Ohio Environmental Protection Agency

Street Address:

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Columbus, OH 43215

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Mailing Address:

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

**RE: FINAL PERMIT TO INSTALL  
CUYAHOGA COUNTY  
Application No: 13-04176**

**CERTIFIED MAIL**

Y	TOXIC REVIEW
Y	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
40 CFR Part 60 Subpart AAa	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

**DATE:** 6/10/2004

Charter Steel  
Ted Rogers  
4300 East 49th Street  
Cuyahoga Heights, OH 44125

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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

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

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

Sincerely,

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

cc: USEPA

CLAA



**Permit To Install  
Terms and Conditions**

**Issue Date: 6/10/2004  
Effective Date: 6/10/2004**

**FINAL PERMIT TO INSTALL 13-04176**

Application Number: 13-04176  
APS Premise Number: 1318171623  
Permit Fee: **\$12350**  
Name of Facility: Charter Steel  
Person to Contact: Ted Rogers  
Address: 4300 East 49th Street  
Cuyahoga Heights, OH 44125

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**4300 East 49th Street  
Cuyahoga Heights, Ohio**

Description of proposed emissions unit(s):  
**Melt shop.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

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

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted 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. 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 shall be submitted pursuant to OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## **3. Risk Management Plans**

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

## **4. Title IV Provisions**

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

## **5. Severability Clause**

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

## **6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and 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. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

## **8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any 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.

## **9. Compliance Requirements**

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

- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## 10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is

granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

**11. Best Available Technology**

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

**12. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

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

### **1. Compliance Requirements**

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

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

### **4. Termination of Permit To Install**

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

### **5. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

## **6. Public Disclosure**

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

## **7. Applicability**

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

## **8. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

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

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

**C. Permit To Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	119.25
PM10	105.12
NOx	188.51
CO	1397.51
SO2	99.53
VOC	77.41
Pb	1.78
Hg	0.17

## Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None.

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

1. The permit to install for this emissions unit was evaluated based on the actual materials (coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant:

**Aluminum:**

**0.825 lb/hour**

**TWA: 10 mg/m<sup>3</sup>**

**Molecular Weight: 26.98**

**TLV = 10 mg/m<sup>3</sup>**

**MAGLC = 238.095 µg/m<sup>3</sup>**

**Maximum Concentration = 0.964µg/m<sup>3</sup> < 238.095 µg/m<sup>3</sup>**

**Calcium Oxide:**

**3.196 lbs/hour**

**TWA: 2.0 mg/m<sup>3</sup>**

**Molecular Weight: 56.08**

**TLV = 2.0 mg/m<sup>3</sup>**

**MAGLC = 47.69 µg/m<sup>3</sup>**

**Maximum Concentration = 3.945µg/m<sup>3</sup> < 47.69 µg/m<sup>3</sup>**

**Carbon Black:**

**0.842 lb/hour**

**TWA: 3.5 mg/m<sup>3</sup>**

**Molecular Weight: -**

**TLV = 3.5 mg/m<sup>3</sup>**

**MAGLC = 83.33 µg/m<sup>3</sup>**

**Maximum Concentration = 0.983µg/m<sup>3</sup> < 83.33 µg/m<sup>3</sup>**

**Iron:**  
**0.915 lb/hour**  
**TWA: 5.0 mg/m<sup>3</sup>**  
**Molecular Weight: 159.70**  
**TLV = 5.0 mg/m<sup>3</sup>**  
**MAGLC = 119.048 µg/m<sup>3</sup>**  
**Maximum Concentration = 1.069µg/m<sup>3</sup> < 119.048 µg/m<sup>3</sup>**

**2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the “Air Toxic Policy” is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the “Air Toxic Policy” will still be satisfied. If, upon evaluation, the permittee determines that the “Air Toxic Policy” will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the “Air Toxic Policy” include the following:**

- a. changes in the composition of the materials used (inks, coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;**
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,**
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).**

**If the permittee determines that the “Air Toxic Policy” will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a “modification” under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.**

- 3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”**
  - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);**
  - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and,**

- c. **where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the “Air Toxic Policy” for the change.**

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B008 - 25 mmBtu/hr natural gas boiler for the VOD system equipped with a low NOx burner	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.01 lb/hr and 0.06 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20), OAC rule 3745-18-06(A) and OAC rule 3745-17-07(A)(1).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.19 lb/hr and 0.83 ton/year.  Carbon monoxide (CO) emissions shall not exceed 2.06 lbs/hr and 9.02 tons/year.  Organic compound (OC) emissions shall not exceed 0.27 lbs/hr and 1.18 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 2.45 lbs/hr and 10.7 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.13 lb/hr and 0.59 ton/year.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).  See Section A.2.c. below.

OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.
40 CFR 60 Subpart Dc	See Section A.2.b. below.

## 2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.
- 2.b** So long as only natural gas fuel is burned, this emissions unit is not subject to the emission limits listed in 40 CFR Part 60, Subpart Dc.
- 2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NO<sub>x</sub> limitation of 100 lb of NO<sub>x</sub>/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

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

## III. Monitoring and/or Recordkeeping Requirements

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

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.19 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9) while firing natural gas.

- c. Emission Limitation:  
0.83 TPY of PM/PM10

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 2.06 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10 while firing natural gas.

- e. Emission Limitation:  
9.02 TPY of CO emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 2.45 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 while firing natural gas.

- g. Emission Limitation:  
10.7 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly NOx emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
OC emissions shall not exceed 0.27 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- i. Emission Limitation:  
1.18 TPY of OC emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
VOC emissions shall not exceed 0.13 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A while firing natural gas.

- k. Emission Limitation:  
0.59 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0245 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 while firing natural gas.

- m. Emission Limitation:  
0.06 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B008 - 25 mmBtu/hr natural gas boiler for the VOD system	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F001 - 250 TPH slag processing operation	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
drop ball crushing material handling, dumping	OAC rule 3745-31-10 thru 20	PM 1.98 lbs/hr and 1.31 TPY PM <sub>10</sub> 0.79 lb/hr and 0.56 TPY  Visible emissions of fugitive dust shall not exceed 15% opacity as a six-minute average. best available technology control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see A.2.).  See section A.2.g
	OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	The control measures specified by this rule are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20),
slag storage pile	OAC rule 3745-31-10 thru 20	PM emissions, 0.84 TPY PM <sub>10</sub> emissions, 0.39 TPY

load-in and wind erosion of storage piles (see Section A.2.c for identification of storage pile)

OAC rule 3745-17-07 (B)(6)

OAC rule 3745-17-08 (B), (B)(6)

best available technology control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.d, A.2.e and A.2.f) ;  
no visible emissions except for 3 minutes in any hour

See section A.2.g

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

The control measures specified by this rule are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

**2.a** The permittee shall employ best available technology control measures for the slag crushing operation(s) for the purpose of ensuring compliance with the applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

- use of an enclosure where practical
- use of water to sufficiently minimize particulate emissions

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

**2.b** For each material handling operation that is not adequately enclosed, the control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of the control measure(s) is unnecessary.

**2.c** The storage piles associated with this source and subject to the requirements of OAC rule 3745-31-05(A)(3) are slag storage piles.

**2.d** The permittee shall employ best available technology control measures on all loading and wind erosion operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. The permittee shall reduce the drop height of the front-end loader and apply water if necessary, to ensure

compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.e The above-mentioned control measure(s) shall be employed for each loading operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- 2.f Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.
- 2.g Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a partial enclosure when practical and water to minimize particulate emissions constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

- 1. The permittee shall apply water at all emission points to minimize or eliminate, at all times, visible emissions of fugitive dust generated by the slag crushing operation. The water shall be applied on a continuous basis. This term and condition shall be waived during wet conditions when there is sufficient moisture to prevent visible emissions of fugitive dust.
- 2. The maximum annual production rate for this emissions unit shall not exceed 112,500 tons, based upon a rolling, 12-month summation of the tons of slag processed per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly process restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	9,375
1-2	18,750
1-3	28,125
1-4	37,500
1-5	46,875
1-6	56,250
1-7	65,625
1-8	75,000
1-9	84,375
1-10	93,750
1-11	103,125
1-12	112,500

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual slag processing limitation shall be based upon a rolling, 12-month summation of the slag processed.

### III. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform daily inspections of loading operations and wind erosion at each storage pile.
2. No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
3. The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for loading operations of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.
4. The permittee may, upon receipt of written approval from the Cleveland Division of Air Quality (Cleveland DAQ), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain records of the following information:
  - a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
  - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
  - c. the dates the control measures were implemented; and
  - d. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in 5.d. shall be kept separately for the loading operations and the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

6. The permittee shall maintain monthly production records for the tons of slag processed in this emissions unit.

### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month slag process rate limitation. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
2. The permittee shall submit deviation reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
  - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
3. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

## V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation  
Visible emissions shall not exceed 15% opacity as a six-minute average.  
  
Applicable Compliance Method  
Compliance shall be determined by visible emission observations performed in accordance with U.S. EPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).
  - b. Emission Limitation crusher emissions  
PM emissions 1.98 lbs/hr  
PM-10 emissions 0.79 lb/hr  
  
Applicable Compliance Method  
The lb/hr emission limitation shall be based on calculations using the controlled emission factors for Crushed Stone Processing taken from U.S. EPA reference document AP-42, 5th edition, Compilation of Air Pollution Emission Factors, Section 13.2.4 (1/95) to establish the emission factor in lb/ton. The emission factors are:  
0.00010 lb per ton of materials handled for PM emissions,  
0.00178 lb per ton of materials screened for PM emissions,  
0.00124 lb per ton of materials crushed for PM emissions,  
0.00005 lb per ton of materials handled for PM10 emissions,  
0.00084 lb per ton of materials screened for PM10 emissions,  
0.00059 lb per ton of materials crushed for PM10 emissions,
  - c. Emission Limitation crusher emissions  
PM emissions 1.31 TPY  
PM-10 emissions 0.56 TPY

**Applicable Compliance Method**

The TPY emission limitation shall be based on calculations using the controlled emission factors in section A.V.1.b. This emission factor is multiplied by the annual tons of material handled, screened and crushed and divided by the factor of 2000 lbs/ton.

- d. Emission Limitation: storage piles  
no visible emissions except for 3 minutes in any hour

**Applicable Compliance Method**

Compliance with the visible emission limitations for the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

- e. Emission Limitation -  
PM emissions, 0.84 TPY from loading operations and wind erosion of storage piles  
PM10 emissions, 0.39 TPY

**Applicable Compliance Method**

The TPY emission limitation shall be based on calculations using the equation 1 for Aggregate Handling and Storage Piles taken from U.S. EPA reference document AP-42, 5th edition, Compilation of Air Pollution Emission Factors, Section 13.2.4 (1/95) to establish the emission factor in lb/ton. The calculated emission factors are: 0.015 lb per ton of materials handled for PM emissions and 0.007 lb per ton of materials handled for PM10 emissions. This emission factor is multiplied by the annual tons of material handled and (1-0.50) to account for the 50% watering emission control efficiency. The calculated value is then divided by 2000 lbs/ton to determine emissions in tons/year.

**VI. Miscellaneous Requirements**

1. None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F001 - Slag material handling, dumping, drop ball crushing, processing and storage	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 -paved roadways and parking areas (see Section A.2.a)	OAC rule 3745-31-05(A)(3)  OAC rule 3745-31-10 thru 20	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).  6.40 tons/year of PM emissions 3.62 tons/year of PM <sub>10</sub> emissions no visible particulate emissions except for 1 minute during any 60-minute period  best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.c, and A.2.e through A.2.i)  See section A.2.j
	OAC rule 3745-17-07 (B)(4)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08 (B), (B)(8), (B)(9)	The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).
unpaved roadways and parking areas (see Section A.2.b)	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).

OAC rule 3745-31-10 thru 20	4.43 tons/year of PM emissions 2.40 tons/year of PM <sub>10</sub> emissions  no visible emissions, except for three minutes during any 60-minute period  best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.d through A.2.i)  See section A.2.j
OAC rule 3745-17-07 (B)(5)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-08 (B), (B)(2)	The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

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

paved roadways:  
2.98 miles

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

unpaved roadways:  
0.22 miles

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

**2.d** The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the

permittee has committed to treat the unpaved roadways and parking areas with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.e The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- 2.f Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.
- 2.g The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- 2.h Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- 2.i Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.
- 2.j Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of reduced speed limits and water flushing for control constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

None.

### III. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform daily inspections of all the roadways and parking areas.
2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
3. The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
4. The permittee shall maintain records of the following information:
  - a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
  - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
  - c. the dates the control measures were implemented; and
  - d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

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

### IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
  - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

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

## V. Testing Requirements

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

- a. Emission Limitation:

no visible particulate emissions except for 1 minute during any 60-minute period for paved roadways

Applicable Compliance Method:

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

- b. Emission Limitation:

no visible particulate emissions except for 3 minutes during any 60-minute period for unpaved roadways

Applicable Compliance Method:

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

- c. Emission Limitation -  
Unpaved Roads

PM emissions, 4.43 TPY  
PM10 emissions, 2.4 TPY

Applicable Compliance Method -

The TPY emission limitation shall be based on calculations using the equation 1 for Unpaved Roadways and Parking areas taken from U.S. EPA reference document AP-42, 5th edition, Compilation of Air Pollution Emission Factors, Section 12.5-4 (1/95) to establish the emission factor in lb/VMT. The emission factors are 14.0 lb/VMT for PM emissions and 7.6 lb/VMT for PM10 emissions. This emission factor is multiplied by the annual vehicle miles traveled (VMT) and (1-0.50) to account for the 50% watering emission control efficiency and (1-0.80) to account for the 80% vehicle speed control efficiency and divided by the factor of 2000 lbs/ton.

- d. Emission Limitation -  
Paved Roads  
PM emissions, 6.4 TPY  
PM10 emissions, 3.62 TPY

Applicable Compliance Method -

The TPY emission limitation shall be based on calculations using the equation 1 for Paved Roadways and Parking areas taken from U.S. EPA reference document AP-42, 5th edition, Compilation of Air Pollution Emission Factors, Section 12.5-4 (1/95) to establish the emission factor in lb/VMT. The calculated emission factors are;0.78 lb/VMT for PM emissions and 0.44 lb/VMT for PM10 emissions. This emission factor is multiplied by the annual vehicle miles traveled (VMT) and (1-0.80) to account for the 80% vehicle speed control efficiency.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 - facility roadways and parking areas	None.	None.

2. **Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - Charge handling of steel scrap Handling of steel scrap is conducted inside of a building.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	2.52 lbs/hr and 8.12 TPY of PM/PM10 emissions
		Visible emissions of fugitive dust shall not exceed 5% opacity as a six-minute average.
		best available technology control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust
		OAC rule 3745-17-07(B)(1)
	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	The control measures specified by this rule are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a building for partial capture along with work practices constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

**II. Operational Restrictions**

1. The maximum annual charge rate for this emissions unit shall not exceed 772,391 tons, based upon a rolling, 12-month summation of the tons of scrap steel charged per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	64,366
1-2	128,732
1-3	193,098
1-4	257,464
1-5	321,830
1-6	386,196
1-7	450,562
1-8	514,928
1-9	579,294
1-10	643,660
1-11	708,026
1-12	772,391

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel scrap charge limitation shall be based upon a rolling, 12-month summation.

2. Prior to the operation of this emissions unit, the permittee shall submit a Scrap Management Plan (SMP) to the Cleveland DAQ for review and approval. The main focus of the SMP will be to ensure that the purchase of excessively oily scrap and other combustible material will be minimized to the greatest extent possible. All grades of scrap shall be free of excessive dirt, oil, and grease. Heavily oiled scrap shall not be used. As part of the SMP, the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility. Radioactive scrap material shall not be used at this facility. Any scrap material which is determined to be radioactive shall be disposed of in accordance with the Nuclear Regulatory Commission's (NRC) requirements.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily charge rate records for this emissions unit. These records, at a minimum, shall contain the following information:
  - a. the number of hours this emissions unit was in operation; and
  - b. the tons of steel scrap charged.
2. The permittee shall maintain monthly records of the tons of steel scrap charged during each calendar month.

### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel scrap charge rate limitation for the first 12 calendar months of operation following the issuance of this permit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

### V. Testing Requirements

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

- a. Emission Limitation:  
2.52 lbs/hr of PM/PM<sub>10</sub> emissions

Applicable Compliance Method:

Compliance with the hourly emission limitation may be determined through the use of the emission factor taken from the "Inventory of Iron Foundry Emissions", A.T.Kearney Report for Raw material handling and Charge make-up (0.07 lb/ton) which is multiplied by the maximum hourly charge rate for the emissions unit (120 tons/hr) and (1-0.70) which is the 70% control efficiency of scrap steel handling conducted inside of the building enclosure as well as work practices.

- b. Emission Limitation:  
8.12 TPY of PM/PM<sub>10</sub> emissions

Applicable Compliance Method:

The ton per year emissions shall be determined by multiplying the emission factor taken from the "Inventory of Iron Foundry Emissions", A.T.Kearney Report for Raw material handling and Charge make-up (0.07 lb/ton) by the actual annual steel scrap charge rate for the emissions unit, (1-0.70) which is the 70% control efficiency of scrap steel handling conducted inside of the building enclosure as well as work practices and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance with the annual steel scrap charge limitation based upon a rolling, 12-month summation is met.

- c. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 5% opacity as a six-minute average.

**Applicable Compliance Method**

Compliance with the visible emission limitations shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - Charge handling of steel scrap	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F004 - Dust silo equipped with a bin vent for control of particulate emissions from the Melt Shop Baghouse	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and 40 CFR Part 60 Subpart AAa.
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pounds/hour and 0.45 TPY of PM/PM <sub>10</sub> emissions
	OAC rule 3745-17-11(B)	See A.2.a  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to 40 CFR Part 60 Subpart AAa.
	40 CFR Part 60 Subpart AAa	Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

**2. Additional Terms and Conditions**

- 2.a Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a bin vent filter with an emission limit of 0.01 gr/dscf of

exhaust gases constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

None.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

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

## V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
Visible PE shall not exceed 10% opacity, as a 6-minute average, except as provided by rule.  
  
Applicable Compliance Method:  
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
  - b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pounds/hour  
  
Applicable Compliance Method:

Compliance with the emission limitation may be determined by the use of the calculation below using the control equipment manufacturer's outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grains/dscf}) * (1200 \text{ acfm}) * (70+460)/(70+460) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:  
0.45 TPY OF PM/PM10 emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F004 - Dust silo	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P032 - number 1 natural gas fired tundish preheater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.  Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.  Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below.  See section A.2.c. below.  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx emission limitation of 100 lbs/MMcf and acceptance of a CO emission limitation of 84 lbs/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P032 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for sources P900-P902.

- c. Emission Limitation:  
0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
8.58 TPY of NO<sub>x</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.05 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P032 - number 1 natural gas fired tundish preheater rated at 20 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P033 - number 2 natural gas fired tundish preheater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.  Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.  Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P033 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
8.58 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.05 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P033 - number 2 natural gas fired tundish preheater rated at 20 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measure</u>
P034 - number 3 natural gas fired tundish preheater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.  Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.  Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P034 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
8.58 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.05 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P034 - number 3 natural gas fired tundish preheater rated at 20 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P035 - number 1 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.
		Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
		See section A.2.b below
		See section A.2.c below
	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P035 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P035 - number 1 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P036 - number 2 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile organic compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.  Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P036 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

•  
Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P036 - number 2 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P037 - number 3 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.  Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P037 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
Particulate emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of particulate emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P037 - number 3 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P038 - number 4 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.  Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P038 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu .ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P038 - number 4 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P039 - number 5 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.  Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P039 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM<sub>10</sub> emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of PM/PM<sub>10</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P039 - number 5 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P040 - number 6 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions (PE) shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.  Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

**2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.

**2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:

PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P040 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P040 - number 6 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P041 - natural gas fueled cut-off torch rated at 10mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions (PE) shall not exceed 0.074 lb/hr and 0.32 ton/year.  Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year.  Organic compound (OC) emissions shall not exceed 0.10 lb/hr and 0.44 ton/year.
	OAC rule 3745-17-07(A)(1)	See section A.2.b below  See section A.2.c below  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

**2. Additional Terms and Conditions**

- 2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.
  
- 2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:  
  
PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY  
  
Sulfur dioxide (SO2) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY  
  
Nitrogen oxide (NOx) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY  
  
Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY  
  
Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY  
  
Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY  
  
Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY  
  
3 percent opacity from the meltshop baghouse stack exit
  
- 2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NOx limitation of 100 lb of NOx/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The emissions from P041 shall be vented to the melt shop baghouse.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.074 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- c. Emission Limitation:  
0.32 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
CO emissions shall not exceed 0.82 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- e. Emission Limitation:  
3.59 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
NOx emissions shall not exceed 0.98 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- g. Emission Limitation:  
4.29 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- i. Emission Limitation:  
0.24 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- k. Emission Limitation:  
0.03 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
OC emissions shall not exceed 0.10 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0098 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

- m. Emission Limitation:  
0.44 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P041 - natural gas fueled cut-off torch rated at 10mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P042 - natural gas fired process space heater rated at 20 mmBtu/hr	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.01 lb/hr and 0.05 ton/year.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-18-06(A).
	OAC rule 3745-31-10 thru 20	PM/PM <sub>10</sub> emissions shall not exceed 0.15 lb/hr and 0.66 ton/year.  Carbon monoxide (CO) emissions shall not exceed 1.64 lbs/hr and 7.18 tons/year.  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 1.96 lbs/hr and 8.58 tons/year.  Volatile Organic Compounds (VOC) emissions shall not exceed 0.11 lb/hr and 0.47 ton/year.
		Organic compound (OC) emissions shall not exceed 0.22 lb/hr and 0.96 ton/year.
		See section A.2.b below
		See section A.2.c below
	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-21-08(B)	See Section A.2.a. below.
OAC rule 3745-23-06(B)	See Section A.2.a. below.

## 2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.
- 2.b** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following from the baghouse outlet:
- PM/PM10 emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY
- Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY
- Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY
- Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY
- Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY
- Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY
- Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY
- 3 percent opacity from the meltshop baghouse stack exit
- 2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, acceptance of a NO<sub>x</sub> limitation of 100 lb of NO<sub>x</sub>/MMcf and acceptance of a CO limitation of 84 lb of CO/MMcf constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

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

### III. Monitoring and/or Recordkeeping Requirements

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

### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.15 lb/hr

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr) and dividing by the emissions unit's total heat input capacity (20.0 mmBtu/hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- b. Emission Limitation:  
0.66 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- c. Emission Limitation:  
CO emissions shall not exceed 1.64 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference

document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- d. Emission Limitation:  
7.18 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- e. Emission Limitation:  
NOx emissions shall not exceed 1.96 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- f. Emission Limitation:  
8.58 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- g. Emission Limitation:  
VOC emissions shall not exceed 0.11 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- h. Emission Limitation:  
0.47 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- i. Emission Limitation:  
SO<sub>2</sub> emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0196 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- j. Emission Limitation:  
0.05 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- k. Emission Limitation:  
OC emissions shall not exceed 0.22 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 11 lbs of OC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0198 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee may demonstrate compliance with this emission limitation in accordance with the testing requirement for the combined allowable emissions as described in the terms and conditions for source P900-P902.

- l. Emission Limitation:  
0.96 TPY of OC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- m. Emission Limitation:  
3 percent opacity from the meltshop baghouse stack exit

Applicable Compliance Method:

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

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P042 - natural gas fired process space heater rated at 20 mmBtu/hr	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P043 - Vacuum Oxygen Degasser (VOD) vessel for Low carbon and Stainless Steel production or degassing and decarburization of the steel</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>Flare combustion emissions:</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.009 lb/hr and 0.04 TPY</p> <p>The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).</p>
<p>CO emissions are controlled by a flare during the oxygen lancing degassing process for Low carbon and Stainless Steel production.</p>	<p>OAC rule 3745-31-10 thru 20</p>	<p>no visible particulate emissions.</p> <p>Flare combustion emissions:</p> <p>PM/PM<sub>10</sub> emissions shall not exceed 0.12 lbs/hr and 0.52 TPY</p> <p>Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 1.57 lbs/hr and 6.87 TPY</p> <p>Carbon monoxide (CO) emissions shall not exceed 1.32 lbs/hr and 5.78 TPY</p> <p>Volatile organic compounds (VOC) emissions shall not exceed 0.09 lbs/hr and 0.39 TPY</p>
<p>Flare will not be operational during the natural decarburization process of steel.</p>		<p>Emissions from the Oxygen Lancing Degassing for Low carbon and Stainless Steel production with flare control equipment:</p> <p>Carbon monoxide (CO) emissions shall not exceed 23.31 lbs/hr and 82.8 TPY</p>

	Emissions from the natural decarburization of the steel (uncontrolled):  Carbon monoxide (CO) emissions shall not exceed 25.0 lbs/hr and 59.22 TPY  See section A.2.d below
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See Section A.2.b. below.
OAC rule 3745-23-06(B)	See Section A.2.b. below.

## 2. Additional Terms and Conditions

- 2.a The flare shall meet the design requirements specified in 40 CFR Part 60.18.
- 2.b The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively.
- 2.c A flare control system with 99+ % control efficiency is required during the oxygen lancing degassing process for Low carbon and Stainless Steel production.

The flare control system will not be operational during the natural decarburization process of steel due to the relatively low uncontrolled emission rate and the safety hazards associated with the process.

- 2.d The permittee is required to perform a Best Available Control Technology (BACT) review for NO<sub>x</sub>, CO, PM/PM<sub>10</sub>, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

CO- Use of a combustion flare system.

## II. Operational Restrictions

1. The permittee shall operate the flare system for control of CO emissions when the emissions unit is in operation during the degassing of the steel using oxygen lance.
2. The maximum annual process rate for the Low carbon and Stainless Steel production or degassing and decarburization of the steel in this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

## III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain a device to continuously monitor the flame presence when the emissions unit is in operation during the Oxygen Lansing Degassing process. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
2. The permittee shall record the following information each day:

- a. All periods during which the flame presence sensor was inoperable.
  - b. The operating times for the flare, monitoring equipment, and the emissions unit during the Oxygen Lansing Degassing process.
3. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:
- a. the number of hours this emissions unit was in operation; and
  - b. the tons of steel processed.
4. The permittee shall maintain monthly records of the tons of steel processed during each calendar month, as well as the rolling, 12-month summation of the amount of steel processed.
5. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods during which the flame presence sensor was not functioning properly. The reports shall include the date, time, and duration of each such period.
2. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel process rate limitation for the first 12 calendar months of operation following the issuance of this permit and exceedances of the rolling, 12-month limitation thereafter. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Cleveland DAQ by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

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

- a. Emission Limitation:  
no visible particulate emissions.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:  
flare combustion  
PM/PM10 emissions shall not exceed 0.12 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 7.6 lbs of particulates/mm cu. ft. by the flare's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:  
flare combustion  
0.52 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
flare combustion  
CO emissions shall not exceed 1.32 lbs/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 84 lbs of CO/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10 while firing natural gas.

- e. Emission Limitation:  
flare combustion  
5.78 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly CO emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- f. Emission Limitation:  
flare combustion  
NOx emissions shall not exceed 1.57 lbs/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 100 lbs of NOx/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 while firing natural gas.

- g. Emission Limitation:  
flare combustion  
6.87 TPY of NOx emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- h. Emission Limitation:  
flare combustion  
VOC emissions shall not exceed 0.09 lb/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 5.5 lbs of VOC/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A while firing natural gas.

- i. Emission Limitation:  
flare combustion  
0.39 TPY of VOC emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly VOC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- j. Emission Limitation:  
flare combustion  
SO<sub>2</sub> emissions shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO<sub>2</sub>/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0157 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

If required, the permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 while firing natural gas.

- k. Emission Limitation:  
flare combustion  
0.04 TPY of SO<sub>2</sub> emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO<sub>2</sub> emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- l. Emission Limitation:  
Emissions from the Oxygen Lancing Degassing for Low carbon and Stainless Steel production with flare control equipment  
Carbon monoxide (CO) emissions shall not exceed 23.31 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined by multiplying the material balanced based emission factor of (23.31 lbs of CO per ton) by the maximum process rate of the emissions unit (100 tons/hr) and the 99.0 % control efficiency of the flare (1-0.99) to arrive at the lb/hr emission rate.

- m. Emission Limitation:  
Emissions from the Oxygen Lancing Degassing for Low carbon and Stainless Steel production with flare control equipment  
82.8 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the compliance demonstration in A.V.1.1 by the maximum process rate of the emissions unit (100 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton.

- n. Emission Limitation:  
Emissions from the natural decarburization of the steel (uncontrolled)  
Carbon monoxide (CO) emissions shall not exceed 25.0 lbs/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lbs/hr emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. See A.V.2

- o. Emission Limitation:  
Emissions from the natural decarburization of the steel (uncontrolled)  
59.22 TPY of CO emissions

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.n by the maximum process rate of the emissions unit (100 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

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

Emissions testing shall be conducted within 60 days of achieving maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up of the facility.

The emission testing shall be conducted to demonstrate compliance with the CO emission limitations.

The following test methods shall be employed to demonstrate compliance with the CO emission limitation: Methods 1-4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the VOD is operational during the natural decarburization of the steel. The emissions unit shall be operated at or near its maximum capacity unless otherwise specified or approved by the Cleveland Division of Air Quality.

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

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P043 - Vacuum Oxygen Degasser (VOD) vessel	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - Carbon silo - storage of carbon additive for steel alloying equipped with a bin vent for control of particulate emissions	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour and 0.45 TPY OF PM/PM10 emissions  Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.  See A.2.a
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a bin vent filter with an emission limit of 0.01 gr/dscf of exhaust gases constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

None.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

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

## V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
Visible PE shall not exceed 10% opacity, as a 6-minute average.  
  
Applicable Compliance Method:  
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).
  - b. Emission Limitation:  
PM/PM<sub>10</sub> emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour

**Applicable Compliance Method:**

Compliance with the emission limitation may be determined by the use of the calculation below using the control equipment manufacturer's outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grains/dscf}) * (1200 \text{ acfm}) * (70+460)/(70+460) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. **Emission Limitation:**  
0.45 TPY OF PM/PM<sub>10</sub> emissions

**Applicable Compliance Method:**

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - Carbon silo - storage of carbon additive for steel alloying	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P045 - Lime Silo - storage for lime additive for steel alloying equipped with a bin vent for control of particulate emissions	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour and 0.45 TPY OF PM/PM10 emissions  Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average.  See A.2.a
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a bin vent filter with an emission limit of 0.01 gr/dscf of exhaust gases constitutes BACT for this emission unit. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) thru (20) above.

## II. Operational Restrictions

None.

## III. Monitoring and/or Recordkeeping Requirements

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

## IV. Reporting Requirements

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

## V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
Visible PE shall not exceed 10% opacity, as a 6-minute average.  
  
Applicable Compliance Method:  
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(1).
  - b. Emission Limitation:  
PM/PM<sub>10</sub> emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour

**Applicable Compliance Method:**

Compliance with the emission limitation may be determined by the use of the calculation below using the control equipment manufacturer's outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grains/dscf}) * (1200 \text{ acfm}) * (70+460)/(70+460) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. **Emission Limitation:**  
0.45 TPY OF PM/PM<sub>10</sub> emissions

**Applicable Compliance Method:**

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

**VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P045 - Lime Silo - storage for lime additive for steel alloying	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P046 - cooling tower 1.5 MMgallons/hr for cooling of process water	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).
	OAC rule 3745-31-10 thru 20	PM/PM10 emissions shall not exceed 1.5 lbs/hr and 6.6 TPY  OC emissions shall not exceed 0.15 lb/hr and 0.66 TPY  Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.
	OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

1. The water flow rate of the cooling tower shall not exceed 25,000 gpm.

2. The monthly average concentration of total dissolved solids (TDS) in the cooling tower water shall not exceed 5,682 mg/gallon.
3. The monthly average concentration of organics in the cooling tower water shall not exceed 568 mg/gallon.
4. The cooling tower will be equipped with drift eliminators to reduce drift water droplets by inertial separation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall properly install, operate and maintain equipment to monitor the cooling tower water flow rate. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall monitor and record the cooling tower water flow rate, in gallons per minute, at a minimum frequency of once/day.
2. The permittee shall sample the cooling tower water monthly to adequately demonstrate compliance with the monthly average concentration of total dissolved solids (TDS) limitation.
3. The permittee shall sample the cooling tower water monthly to adequately demonstrate compliance with the monthly average concentration of organics limitation.

### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the
  - a. cooling tower water flow rate exceeds 25,000 gpm;
  - b. the monthly average concentration of total dissolved solids (TDS) in the cooling tower water exceeds 5,682 mg/gallon; and
  - c. the monthly average concentration of organics in the cooling tower water exceeds 568 mg/gallon.

### **V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

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

- b. Emission Limitation:  
PM/PM10 emissions shall not exceed 1.5 lbs/hr.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be determined by use of the following formulas:

circulation rate (gal/min) x drift factor (%) = Drift Rate

$(25,000 \text{ gal/min}) \times (0.008/100) = 2 \text{ gal/min}$  or 454.2 liters/hr

concentration of make up water (mg/liter) x number of concentration cycles for the cooling tower  
= TDS

$500 \text{ mg/liter} \times 3 = 1500 \text{ mg/liter}$

$\text{Drift rate} \times \text{TDS} \times 1 \text{ lb}/453,592 \text{ mg} = \text{emission rate in lb/hr}$

- c. Emission Limitation:  
6.6 TPY of PM/PM10 emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

- d. Emission Limitation:  
OC emissions shall not exceed 0.15 lb/hr.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be determined by use of the following formulas:

circulation rate (gal/min) x drift factor (%) = Drift Rate

$(25,000 \text{ gal/min}) \times (0.008/100) = 2 \text{ gal/min}$  or 454.2 liters/hr

organic concentration of make up water (mg/liter) x number of concentration cycles for the cooling tower  
= TDS

$50 \text{ mg/liter} \times 3 = 150 \text{ mg/liter}$

$\text{Drift rate} \times \text{TDS} \times 1 \text{ lb}/453,592 \text{ mg} = \text{emission rate in lb/hr}$

- e. Emission Limitation:  
0.66 TPY of OC emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly OC emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P046 - cooling tower 1.5 MMgallons/hr for cooling of process water	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P900 - 110 TPH capacity Electric Arc Furnace (EAF) with direct evacuation control (DEC) for capture and a baghouse for control of emissions	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 22.0 lbs/hr.  Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY. See sections A.I.2.b and A.II.6.  The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and NSPS 40 CFR Part 60 Subpart AAa.
	OAC rule 3745-31-10 thru 20	Emissions from the EAF shall not exceed the following: PM/PM <sub>10</sub> emissions shall not exceed 12.43 lbs/hr and 40.15 TPY  Nitrogen oxide (NO <sub>x</sub> ) emissions shall not exceed 36.29 lbs/hr and 117.25 TPY  Carbon monoxide (CO) emissions shall not exceed 356.4 lbs/hr and 1,151.2 TPY  Volatile organic compounds (VOC) emissions shall not exceed 22.0 lbs/hr and 71.06 TPY  Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.55 lb/hr and 1.78 TPY
	OAC rule 3745-31-05(C)	See section A.2.a.

OAC rule 3745-17-07 (A)(1)	See section A.2.c.  71.06 tons of SO <sub>2</sub> per rolling 12-month period.
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(E)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
NSPS 40 CFR Part 60 Subpart AAa	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  The visible emission limitation specified by this rule is equivalent to the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

**2.a** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM<sub>10</sub> emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

6 percent opacity from the EAF

**2.b** .Mercury emissions shall be controlled by using the baghouse and by restricting the amount of mercury containing scrap used in the process. For purposes of this permit to install, "mercury containing scrap" is defined as #2 bundles or shredded (frag) scrap consisting in part of either automobile or white goods scrap obtained from a source where the readily accessible mercury containing devices have not been removed prior to crushing or shredding.

**2.c** The permittee is required to perform a Best Available Control Technology (BACT) review for NOx, CO, PM/PM<sub>10</sub>, lead, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

PM/PM<sub>10</sub>- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

Lead - Use of a baghouse with an emission limit of 0.000065 gr/dscf of exhaust gases

NOx- Use of DEC Direct Evacuation Control (DEC) system, low NOx oxy-fuel burners and monitoring of specific process variables.

VOC - Use of DEC Direct Evacuation Control (DEC) system

CO - Use of DEC Direct Evacuation Control (DEC) system

## II. Operational Restrictions

1. The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.
2. The emissions from P900 shall be vented to the melt shop baghouse. In addition, the capture system shall be designed and operated such that all emissions are captured and ducted to the dropout chamber and then to the baghouse. The capture system for the emissions unit shall include a common canopy hood and roof control system. The emissions from the furnace roof vent to the dropout and then to the meltshop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

4. Prior to the operation of this emissions unit, the permittee shall submit a Scrap Management Plan (SMP) to the Cleveland DAQ for review and approval. The main focus of the SMP will be to ensure that the purchase of excessively oily scrap and other combustible material will be minimized to the greatest extent possible. All grades of scrap shall be free of excessive dirt, oil, and grease. Heavily oiled scrap shall not be used. As part of the SMP, the permittee shall install a radionuclide detector which will be used to inspect all incoming scrap material into the facility. Radioactive scrap material shall not be used at this facility. Any scrap material which is determined to be radioactive shall be disposed of in accordance with the Nuclear Regulatory Commission's (NRC) requirements.
5. The following standards are requirements of the NSPS Subpart AAa(The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.), BACT and BAT. Visible emissions shall not exceed the following limits as a six-minute average:
  - a. 3 percent opacity from the baghouse exit; and,
  - b. 6 percent opacity from the meltshop [Note: This limit is more restrictive than the NSPS limit which only limits emissions due solely to the operation of an EAF(s) or AOD vessel(s)].
6. No more than 15% by weight of the scrap fed to the EAF will be mercury containing scrap, on a daily basis. Based upon the results of performance testing, the percent feed rate may be adjusted.

### III. Monitoring and/or Recordkeeping Requirements

1. The following are requirements of the NSPS Subpart AAa. Observations of the opacity of the visible emissions from the meltshop baghouse shall be performed by a certified visible emission observer as follows:
  - a. Visible emission observations shall be conducted at least once per day of operation. The observations shall occur when the furnace is operating in the charging, melting, tapping and refining period. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A and, for at least three 6-minute periods, the opacity shall be recorded for point(s) where the greatest opacity visible emissions are observed, and that portion of the plume where the condensed water phase is not present in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emission, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the limitation for visible particulate emissions.

The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.
2. In accordance with NSPS Subpart AAa, observations of the opacity of the visible emissions from the shop shall be performed by a certified visible emission observer as follows:
  - a. Visible emission observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period. Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. The owner or operator shall maintain records of all shop observations made in accordance with the above requirements. The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.
3. The permittee shall monitor the operation of the furnace control systems and maintain records in accordance with the following requirements:
  - a. The permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The monitoring device may be installed in any appropriate location in the EAF ducts prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall

have an accuracy of plus or minus 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions. The pressure determined during the most recent compliance demonstration shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Ohio EPA, Division of Air Pollution Control (DAPC) to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of the 15-minute integrated average of the pressure whenever the permittee can demonstrate to the Agency's satisfaction that EAF operating conditions upon which the pressures were previously established are no longer applicable;

- b. The permittee shall check and record on a once-per-shift basis the furnace static pressure and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. The monitoring device may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring devices shall have an accuracy of plus or minus 10 percent over their normal operating range and shall be calibrated according to the manufacturer's instructions. The Ohio EPA, DAPC may require the permittee to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR Part 60. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values will be considered by the Ohio EPA, DAPC to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of these parameters whenever the permittee can demonstrate to the Agency's satisfaction that the operating conditions upon which the parameters were previously established are no longer applicable;
  - c. The permittee shall perform and maintain records of the monthly operational status inspections of the equipment that is important to the performance of the total capture systems (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion.) Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition the Ohio EPA, DAPC to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system; and,
  - d. Upon approval by the U.S. EPA, an alternative method may be established to replace the monitoring and recordkeeping requirements found in 2.a, 2.b, and 2.c above.
4. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:
- a. the number of hours this emissions unit was in operation; and
  - b. the tons of steel produced.

5. The permittee shall maintain monthly records of the tons of steel produced during each calendar month and the rolling, 12-month summation of the steel produced.
6. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the meltshop baghouse while the emissions unit is in operation. The monitoring equipment shall be installed calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
7. The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.
8. The permittee shall identify the types of scrap received as mercury containing scrap or other scrap (including scrap from which mercury containing devices have been removed). The permittee shall record the weight of mercury containing scrap, in pounds, the weight of other scrap, in pounds, and the charge identification number, for each furnace charge. The permittee shall determine and record the percent by weight of mercury containing scrap charged to the EAF, on a daily basis.

#### IV. Reporting Requirements

1. The permittee shall submit quarterly written deviation (excursion) reports of all exceedances of the opacity restrictions for the meltshop baghouse from A.I.2.a. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity exceeds these limits.
2. The permittee shall submit quarterly written deviation (excursion) reports that identify all exceedances of the static pressure values in the EAF established in A.III.3.b above and either operation of control system fan motor amperes at values exceeding plus 15 percent of the values established under A.III.3.b above or operation at flow rates lower than those established under A.III.3.b above.
3. The permittee shall submit quarterly written deviation (excursion) reports that identify all periods of time during which the pressure drop for the Melt Shop Baghouse did not comply with the allowable range specified in A.II.1.
4. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel production rate limitation for the first 12 calendar months of operation following the issuance of this permit and for exceedances of the rolling, 12-month limitation thereafter. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

## V. Testing Requirements

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

- a. Emission Limitation:  
12.43 lbs/hr of PM/PM<sub>10</sub> emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the controlled FIRE 6.22 emission factor for the EAF steel processing (0.113 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- b. Emission Limitation:  
40.15 TPY of PM/PM<sub>10</sub> emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the controlled FIRE 6.22 emission factor for the EAF steel processing (0.113 lb/ton) which is multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- c. Emission Limitation:  
22.0 lbs/hr of SO<sub>2</sub> emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.2 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- d. Emission Limitation:  
71.06 tons of SO<sub>2</sub> emissions per rolling 12-month period P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.2 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- e. Emission Limitation:  
36.29 lbs/hr of NO<sub>x</sub> emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.33 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- f. Emission Limitation:  
117.25 TPY of NO<sub>x</sub> emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.33 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- g. Emission Limitation:  
356.4 lbs/hr of CO emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (18.0 lbs/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.82) which is the control efficiency for the DEC control system.

- h. Emission Limitation:  
1,151.2 TPY of CO emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (18.0 lbs/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.82) which is the control efficiency for the DEC control system and dividing by the factor of (2000 lbs/ton).

- i. Emission Limitation:  
22.0 lbs/hr of VOC emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for EAF steel processing (0.2 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- j. Emission Limitation:  
71.06 TPY of VOC emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for EAF steel processing (0.2 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- k. Emission Limitation:  
0.55 lb/hr of Lead (Pb) emissions P900

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.5 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse system.

- l. Emission Limitation:  
1.78 TPY of Lead (Pb) emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.5 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse control system and dividing by the factor of (2000 lbs/ton).

- m. Emission Limitation:  
Visible PE shall not exceed 3% opacity from the baghouse stack.

Applicable Compliance Method:

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

- n. Emission Limitation:  
20.38 lbs/hr, 0.0024 grains/dscf of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- o. Emission Limitation:  
88.85 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr particulate emission rate established through the emissions testing requirement in A.V.1.n by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- p. Emission Limitation:  
264.1 lbs/hr of SO2 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- q. Emission Limitation:  
99.43 TPY of SO<sub>2</sub> emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr SO<sub>2</sub> emission rate established through the emissions testing requirement in A.V.1.p by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- r. Emission Limitation:  
56.2 lbs/hr of NO<sub>x</sub> emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- s. Emission Limitation:  
181.64 TPY of NO<sub>x</sub> emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NO<sub>x</sub> emission rate established through the emissions testing requirement in A.V.1.r by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- t. Emission Limitation:  
401.74 lbs/hr of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- u. Emission Limitation:  
1,297.41 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.t by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- v. Emission Limitation:  
23.02 lbs/hr of VOC emissions Meltshop baghouse
- Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- w. Emission Limitation:  
74.59 TPY of VOC emissions Meltshop baghouse
- Applicable Compliance Method:  
The ton per year limitation was developed by dividing the lb/hr VOC emission rate established through the emissions testing requirement in A.V.1.v by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- x. Emission Limitation:  
0.000065 gr/dscf, 0.57 lb/hr of Lead (Pb) emissions Meltshop baghouse
- Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- y. Emission Limitation:  
1.78 TPY of Lead (Pb) emissions Meltshop baghouse
- Applicable Compliance Method:  
The ton per year limitation was developed by dividing the lb/hr Pb emission rate established through the emissions testing requirement in A.V.1.x by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- z. Emission Limitation:  
Visible PE shall not exceed 6% opacity from the EAF.
- Applicable Compliance Method:  
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
- aa. Emission Limitation:  
0.052 lb/hr of Mercury (Hg) emissions Meltshop baghouse



Part 60, Appendix A for NO<sub>x</sub> and Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO, Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A for VOC and Methods 1 through 4 and 12 or 29 of 40 CFR Part 60, Appendix A for Lead (Pb) and Methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for Mercury (Hg). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

3. The permittee shall conduct, or have conducted, a one-time emission test for this emissions unit for dioxins and furans in accordance with the following requirements:
  - a. Within 180 days after reaching maximum operating capabilities, the permittee shall conduct performance test and furnish Ohio EPA a written report of the results of such performance test.
  - b. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
  - c. The permittee shall employ Method 23 of 40 CFR Part 60, Appendix A to document the actual emission rate of dioxins and furans from EAF operations.
  - d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

## VI. Miscellaneous Requirements

1. Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
  - c. actual start-up date (within 15 days after such date); and
  - d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
DAPC - Air Quality Modeling and Planning  
Lazarus Government Center  
P.O. Box 1049  
Columbus, OH 43216-1049

and

The Cleveland Division of Air Quality  
1925 St. Clair Ave.  
Cleveland, Ohio 44114

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P900 - electric arc furnace 110 TPH capacity, for the melting of scrap steel.	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P901 - LMF - Ladle Metallurgy Furnace, 110 TPH capacity, for alloy mixing and re-sulfurization of molten steel	OAC rule 3745-31-05(A)(3)	<p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 220.0 lbs/hr during the production of resulfurized grade steel.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 22.0 lbs/hr during the production of all other grades of steel.</p> <p>The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-31-05(C).</p>
	OAC rule 3745-31-10 thru 20	<p>Emissions from the LMF shall not exceed the following:                      PM/PM<sub>10</sub> emissions shall not exceed 2.20 lbs/hr and 7.20 TPY</p> <p>Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 1.65 lbs/hr and 5.32 TPY</p> <p>Carbon monoxide (CO) emissions shall not exceed 33.0 lbs/hr and 107.0 TPY</p> <p>Volatile organic compounds (VOC) emissions shall not exceed 0.22 lbs/hr and 0.71 TPY</p> <p>Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.02 lb/hr and 0.07 TPY</p>
		See section A.2.a

OAC rule 3745-31-05(C)	See section A.2.b  28.0 tons of SO <sub>2</sub> per rolling 12-month period, during the production of resulfurized grade steel.  71.06 tons of SO <sub>2</sub> per rolling 12-month period, during the production of all other grades of steel.
OAC rule 3745-17-07 (A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-07 (B)(3)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-18-06(E)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

**2.a** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM<sub>10</sub> emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.b** The permittee is required to perform a Best Available Control Technology (BACT) review for NO<sub>x</sub>, CO, PM/PM<sub>10</sub>, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

PM/PM<sub>10</sub>- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

## II. Operational Restrictions

1. The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.
2. The emissions from P901 shall be vented to the melt shop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

4. The maximum annual production rate for this emissions unit during resulfurization grade steel production shall not exceed 28,000 tons of steel, based upon a rolling, 12-month summation of

the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	2,333
1-2	4,666
1-3	6,999
1-4	9,332
1-5	11,665
1-6	13,998
1-7	16,331
1-8	18,664
1-9	20,997
1-10	23,330
1-11	25,663
1-12	28,000

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel resulfurization production limitation shall be based upon a rolling, 12-month summation of the steel production.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall monitor the baghouse control system and maintain records in accordance with the following requirements.

The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
3. The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.

4. The permittee shall maintain production records for the LMF. These records, at a minimum, shall contain the following information:
  - a. the number of hours this emissions unit was in operation; and
  - b. the tons of steel produced.
5. The permittee shall maintain monthly records of the tons of steel produced during each calendar month.
6. The permittee shall maintain production records for the LMF during the resulfurization process. These records, at a minimum, shall contain the following information:
  - a. the number of hours this emissions unit was in operation; and
  - b. the tons of steel produced during the resulfurization process.
7. The permittee shall maintain monthly records of the tons of steel produced during the resulfurization process each calendar month.

#### **IV. Reporting Requirements**

1. The permittee shall submit written deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the range established during the most recent emission test that demonstrated that the emissions unit was in compliance, as well as the corrective actions that were taken to achieve compliance.
2. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel production rate limitation for the first 12 calendar months of operation following the issuance of this permit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

#### **V. Testing Requirements**

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

- a. Emission Limitation:  
2.20 lbs/hr of PM/PM10 emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (2.0 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.

- b. Emission Limitation:  
7.20 TPY of PM/PM10 emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor LMF steel processing (2.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).

- c. Emission Limitation:  
220.0 lbs/hr of SO<sub>2</sub> emissions (resulfurization) P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for resulfurized steel processing (2.0 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- d. Emission Limitation:  
28.0 tons of SO<sub>2</sub> emissions per rolling 12-month period (resulfurization) P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for resulfurized steel processing (2.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- e. Emission Limitation:  
1.65 lbs/hr of NO<sub>x</sub> emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.015 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- f. Emission Limitation:  
5.32 TPY of NO<sub>x</sub> emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for LMF steel processing (0.015 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- g. Emission Limitation:  
33.0 lbs/hr of CO emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.3 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- h. Emission Limitation:

107 TPY of CO emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for LMF steel processing (0.3 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- i. Emission Limitation:  
0.22 lbs/hr of VOC emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.002 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).

- j. Emission Limitation:  
0.71 TPY of VOC emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for LMF steel processing (0.002 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- k. Emission Limitation:  
0.02 lb/hr of Lead (Pb) emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.02 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.

- l. Emission Limitation:  
0.07 TPY of Lead (Pb) emissions P901

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor LMF steel processing (0.02 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).

- m. Emission Limitation:  
Visible PE shall not exceed 3% opacity from the baghouse stack.

Applicable Compliance Method:

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

- n. Emission Limitation:  
20.38 lbs/hr, 0.0024 gr/dscf of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- o. Emission Limitation:  
88.85 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:  
The ton per year limitation was developed by dividing the lb/hr particulate emission rate established through the emissions testing requirement in A.V.1.n by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- p. Emission Limitation:  
264.1 lbs/hr of SO2 emissions Meltshop baghouse

Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- q. Emission Limitation:  
99.43 TPY of SO2 emissions Meltshop baghouse

Applicable Compliance Method:  
The ton per year limitation was developed by dividing the lb/hr SO2 emission rate established through the emissions testing requirement in A.V.1.p by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- r. Emission Limitation:  
56.2 lbs/hr of NOx emissions Meltshop baghouse

Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- s. Emission Limitation:  
181.64 TPY of NO<sub>x</sub> emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NO<sub>x</sub> emission rate established through the emissions testing requirement in A.V.1.r by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- t. Emission Limitation:  
401.74 lbs/hr of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- u. Emission Limitation:  
1,297.41 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.t by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- v. Emission Limitation:  
23.02 lbs/hr of VOC emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- w. Emission Limitation:  
74.59 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr VOC emission rate established through the emissions testing requirement in A.V.1.v by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- x. Emission Limitation:  
0.000065 gr/dscf, 0.57 lb/hr of Lead (Pb) emissions Meltshop baghouse
- Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.
- y. Emission Limitation:  
1.78 TPY of Lead (Pb) emissions Meltshop baghouse
- Applicable Compliance Method:  
The ton per year limitation was developed by dividing the lb/hr Pb emission rate established through the emissions testing requirement in A.V.1.x by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.
- z. Emission Limitation:  
22.0 lbs/hr of SO<sub>2</sub> emissions (other steel grades) P901
- Applicable Compliance Method:  
Compliance with this emission limitation may be determined through the use of the emission factor for standard grade steel processing (0.2 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).
- aa. Emission Limitation:  
71.06 tons of SO<sub>2</sub> emissions per rolling 12-month period (other steel grades) P901
- Applicable Compliance Method:  
Compliance with this annual emission limitation may be determined through the use of the emission factor for standard steel processing (0.2 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).
- bb. Emission Limitation:  
0.052 lb/hr of Mercury (Hg) emissions Meltshop baghouse
- Applicable Compliance Method:  
Emission factor for mercury was developed based upon known testing and emissions allowables of other sources. An emission factor of 0.000476 lb Hg/ton of steel was used for determining the allowable hourly emission rate as follows: 110 tons/hr x 0.000476 lb Hg/ton = 0.052 lb Hg/hr.
- Compliance shall be based upon the results of the emission testing specified in section A.V.2
- cc. Emission Limitation:

0.17 TPY of Mercury (Hg) emissions

Meltshop baghouse

Applicable Compliance Method:

The emission factor of 0.000476 lb Hg/ton of steel was used to determine annual mercury emissions. This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton as follows:  $710,600 \text{ tons/yr} \times 0.000476 \text{ lb Hg/ton} \times \text{ton}/2000 \text{ lbs} = 0.17 \text{ ton Hg/yr}$ . Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed and divide by 2000 lbs/ton.

2. Emissions testing shall be conducted within 60 days of achieving maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up of the facility. The emission testing shall be conducted to demonstrate compliance with the SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

The test(s) shall be conducted while emissions units P032-P042 and P900-P902 are operating simultaneously at or near their maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.

The following test methods shall be employed to demonstrate compliance with the emission limitations: Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates, Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO<sub>2</sub>, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO<sub>x</sub> and Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO, Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A for VOC and Methods 1 through 4 and 12 or 29 of 40 CFR Part 60, Appendix A for Lead (Pb) and Methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for Mercury (Hg). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

## VI. Miscellaneous Requirements

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P901 - LMF - Ladle Metallurgy Furnace, 110 TPH capacity, for alloy mixing and re-sulfurization of molten steel	None.	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P902 - Continuous caster of steel	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-17-08.
	OAC rule 3745-31-10 thru 20	Emissions from the continuous caster shall not exceed the following: PM/PM10 emissions shall not exceed 1.10 lbs/hr and 3.55 TPY
		See section A.2.a
		See section A.2.b
	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)(3)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08	reasonable available control measures for control of emissions of fugitive dust
	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-18-06(E)(1)

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

## 2. Additional Terms and Conditions

**2.a** The emissions from sources P032-P042 and P900-P902 that vent to the Melt Shop Baghouse shall not exceed the following:

PM/PM<sub>10</sub> emissions shall not exceed 20.38 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 264.1 lbs/hr and 99.43 TPY

Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 56.2 lbs/hr and 181.64 TPY

Carbon monoxide (CO) emissions shall not exceed 401.74 lbs/hr and 1,297.41 TPY

Volatile organic compounds (VOC) emissions shall not exceed 23.02 lbs/hr and 74.59 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.78 TPY

Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY

3 percent opacity from the meltshop baghouse stack exit

**2.b** The permittee is required to perform a Best Available Control Technology (BACT) review for NO<sub>x</sub>, CO, PM/PM<sub>10</sub>, and VOC. The emissions limits based on the BACT requirements are listed under OAC rule 3745-31-(10) through(20) above. The following determinations have been made for this emissions unit:

PM/PM<sub>10</sub>- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

## II. Operational Restrictions

1. The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.
2. The emissions from P902 shall be vented to the melt shop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320
1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall monitor the baghouse control system and maintain records in accordance with the following requirements.

The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
3. The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.
4. The permittee shall maintain daily production records for this emissions unit. These records, at a minimum, shall contain the following information:
  - a. the number of hours this emissions unit was in operation; and,

- b. the tons of steel produced.
- 5. The permittee shall maintain monthly records of the tons of steel produced during each calendar month.

#### IV. Reporting Requirements

- 1. The permittee shall submit written deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the meltshop baghouse did not comply with the range established during the most recent emission test that demonstrated that the emissions unit was in compliance, as well as the corrective actions that were taken to achieve compliance.
- 2. The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month steel production rate limitation for the first 12 calendar months of operation following the issuance of this permit. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

#### V. Testing Requirements

- 1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
1.10 lbs/hr of PM/PM10 emissions                      P902  
  
Applicable Compliance Method:  
Compliance with this emission limitation may be determined through the use of the emission factor for the continuous casting steel processing (1.0 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.
  - b. Emission Limitation:  
3.58 TPY of PM/PM10 emissions                      P902  
  
Applicable Compliance Method:  
Compliance with this annual emission limitation may be determined through the use of the emission factor for continuous casting steel processing (1.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).
  - c. Emission Limitation:  
20.38 lbs/hr, 0.0024 grains/dscf of PM/PM10 emissions                      Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- d. Emission Limitation:  
88.85 TPY of PM/PM10 emissions                      Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr particulate emission rate established through the emissions testing requirement in A.V.1.c by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- e. Emission Limitation:  
264.1 lbs/hr of SO2 emissions                      Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- f. Emission Limitation:  
99.43 TPY of SO2 emissions                      Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr SO2 emission rate established through the emissions testing requirement in A.V.1.e by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- g. Emission Limitation:  
56.2 lbs/hr of NOx emissions                      Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- h. Emission Limitation:  
181.64 TPY of NOx emissions                      Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NO<sub>x</sub> emission rate established through the emissions testing requirement in A.V.1.g by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- i. Emission Limitation:  
401.74 lbs/hr of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- j. Emission Limitation:  
1,297.41 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in A.V.1.i by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- k. Emission Limitation:  
23.02 lbs/hr of VOC emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- l. Emission Limitation:  
74.59 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr VOC emission rate established through the emissions testing requirement in A.V.1.k by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- m. Emission Limitation:

0.000065 gr/dscf, 0.57 lb/hr of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:  
Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- n. Emission Limitation:  
1.78 TPY of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:  
The ton per year limitation was developed by dividing the lb/hr Pb emission rate established through the emissions testing requirement in A.V.1.m by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- o. Emission Limitation:  
Visible PE shall not exceed 3% opacity from the baghouse stack.

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

- p. Emission Limitation:  
0.052 lb/hr of Mercury (Hg) emissions Meltshop baghouse

Applicable Compliance Method:  
Emission factor for mercury was developed based upon known testing and emissions allowables of other sources. An emission factor of 0.000476 lb Hg/ton of steel was used for determining the allowable hourly emission rate as follows: 110 tons/hr x 0.000476 lb Hg/ton = 0.052 lb Hg/hr.

Compliance shall be based upon the results of the emission testing specified in section A.V.2

- q. Emission Limitation:  
0.17 TPY of Mercury (Hg) emissions Meltshop baghouse

Applicable Compliance Method:  
The emission factor of 0.000476 lb Hg/ton of steel was used to determine annual mercury emissions. This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton as follows: 710,600 tons/yr x 0.000476 lb Hg/ton x ton/2000 lbs = 0.17 ton Hg/yr. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed and divide by 2000 lbs/ton.

2. Emissions testing shall be conducted within 60 days of achieving maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up of the facility. The emission testing shall be conducted to demonstrate compliance with the SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

The test(s) shall be conducted while emissions units P032-P042 and P900-P902 are operating simultaneously at or near their maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.

The following test methods shall be employed to demonstrate compliance with the emission limitations: Methods 1 through 5 of 40 CFR Part 60, Appendix A for particulates, Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A for SO<sub>2</sub>, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO<sub>x</sub> and Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A for CO, Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A for VOC and Methods 1 through 4 and 12 or 29 of 40 CFR Part 60, Appendix A for Lead (Pb) and Methods 1 through 4 and 29 of 40 CFR Part 60, Appendix A for Mercury (Hg). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

## **VI. Miscellaneous Requirements**

None.

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P902 - Continuous caster of steel	OAC rule 3745-31-05	None.

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.