



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

50 West Town Street, Suite 700

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

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

Application No: 13-04176

Fac ID: 1318171623

DATE: 2/12/2008

Charter Steel
Tammy Bukach
4300 East 49th Street
Cuyahoga Heights, OH 44125

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

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. 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, OH 43215

Sincerely,

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

CC: USEPA

CLAA



Permit To Install
Terms and Conditions

Issue Date: 2/12/2008
Effective Date: 2/12/2008

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 13-04176

Application Number: 13-04176
Facility ID: 1318171623
Permit Fee: **\$6075**
Name of Facility: Charter Steel
Person to Contact: Tammy Bukach
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):
Admin mod to several emissions units at the melt shop -- B008, P032-P046, F001-F004, and P900.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
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

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

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

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4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to

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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.

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7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

8. Federal and State Enforceability

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

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

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- 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 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.

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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.

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13. Permit-To-Install

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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

5. Construction of New Sources(s)

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

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

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: B008

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

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

C. Permit-To-Install Summary of Allowable Emissions

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

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

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| PM | 112.79 |
| PM10 | 109.99 |
| NOx | 182.65 |
| CO | 1385.56 |
| SO2 | 99.42 |
| VOC | 75.02 |
| Pb | 1.78 |
| Hg | 0.17 |

*The Slag Handling operation at this facility is now permitted under International Mill Service Tube City Inc, PTI 13-04686 (ID 1318178556), at 15.24 tons/yr PM and 6.53 tons/yr PM10.

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Emissions Unit ID: B008

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

1. Any requirements of the MACT standards, 40 CFR Part 63, Subpart A and Subpart YYYYYY–National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities, finalized December 28, 2007, that apply to this facility will be identified in the permittee's Title V permit and in future Permits to Install.

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/m³

Molecular Weight: 26.98

TLV = 10 mg/m³

MAGLC = 238.095 µg/m³

Maximum Concentration = 0.964µg/m³ < 238.095 µg/m³

Calcium Oxide:

3.196 lbs/hour

TWA: 2.0 mg/m³

Molecular Weight: 56.08

TLV = 2.0 mg/m³

MAGLC = 47.69 µg/m³

Maximum Concentration = 3.945µg/m³ < 47.69 µg/m³

Carbon Black:

0.842 lb/hour

TWA: 3.5 mg/m³

Molecular Weight: -

TLV = 3.5 mg/m³

Charter Steel**Facility ID: 131817162****PTI Application: 13-04176****Modification Issued: 2/12/2008**MAGLC = 83.33 $\mu\text{g}/\text{m}^3$ Maximum Concentration = 0.983 $\mu\text{g}/\text{m}^3$ < 83.33 $\mu\text{g}/\text{m}^3$

Iron:

0.915 lb/hour

TWA: 5.0 mg/m^3

Molecular Weight: 159.70

TLV = 5.0 mg/m^3 MAGLC = 119.048 $\mu\text{g}/\text{m}^3$ Maximum Concentration = 1.069 $\mu\text{g}/\text{m}^3$ < 119.048 $\mu\text{g}/\text{m}^3$

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.

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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> |
|---|--------------------------------------|
| B008 - 28.576 mmBtu/hr natural gas boiler for the VOD system equipped with a low NOx burner | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |
| | 40 CFR 60 Subpart Dc |

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: B008

| <u>Applicable Emissions Limitations/Control Measures</u> | |
|---|--|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.02 lb/hr and 0.07 ton/year. | exceed 0.15 lb/hr and 0.68 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). | The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). |
| PM/PM ₁₀ emissions shall not exceed 0.21 lb/hr and 0.93 ton/year. | See Section A.2.c. below. |
| Carbon monoxide (CO) emissions shall not exceed 2.35 lbs/hr and 10.3 tons/year. | Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. |
| Organic compound (OC) emissions shall not exceed 0.31 lbs/hr and 1.35 tons/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Nitrogen oxide (NO _x) emissions shall not exceed 2.80 lbs/hr and 12.27 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Volatile Organic Compounds (VOC) emissions shall not | See Section A.2.a. below. |
| | See Section A.2.a. below. |
| | See Section A.2.b. below. |

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: B008

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_x limitation of 100 lb of NO_x/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:

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Emissions Unit ID: B008

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

Applicable Compliance Method:

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 0.21 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 (0.02802 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:
0.93 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 2.35 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 (0.02802 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:
10.3 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 2.80 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 (0.02802 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:
12.27 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 0.31 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 (0.02802 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:

1.35 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 0.15 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 (0.02802 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:
0.68 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:
SO₂ emissions shall not exceed 0.02 lb/hr.

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Emissions Unit ID: B008

Modification Issued: 2/12/2008**Applicable Compliance Methods:**

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.02802 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:**
0.07 TPY of SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ 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.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: B008

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 - 28.576 mmBtu/hr natural gas boiler for the VOD system This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Chart

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Modification Issued: 2/12/2008

Emissions Unit ID: B008

None.

VI. Miscellaneous Requirements

None.

Chart

PTI A

Modification Issued: 2/12/2008

Emissions Unit ID: F002

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> |
|--|--|
| F002 -paved roadways and parking areas (see Section A.2.a) | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | unpaved roadways and parking areas (see Section A.2.b) |
| | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-07 (B)(4) |

Emissions Unit ID: F002

| | <p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p> | |
|--|---|---|
| <p>OAC rule 3745-17-08 (B), (B)(8), (B)(9)</p> | <p>The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).</p> | <p>no visible emissions, except for three minutes during any 60-minute period</p> <p>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)</p> |
| <p>OAC rule 3745-31-05(A)(3)</p> | <p>6.40 tons/year of PM emissions 3.62 tons/year of PM₁₀ emissions no visible particulate emissions except for 1 minute during any 60-minute period</p> | <p>See section A.2.j</p> <p>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).</p> |
| <p>OAC rule 3745-31-10 thru 20</p> | <p>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)</p> <p>See section A.2.j</p> | <p>The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).</p> |
| | <p>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).</p> | |
| <p>OAC rule 3745-17-07 (B)(5)</p> | <p>The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).</p> | |
| <p>OAC rule 3745-17-08 (B), (B)(2)</p> | <p>The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20).</p> <p>4.43 tons/year of PM emissions 2.40 tons/year of PM₁₀ emissions</p> | |

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

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Emissions Unit ID: F002

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.

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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

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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.

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Emissions Unit ID: F002

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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |

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.

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Emissions Unit ID: F002

VI. Miscellaneous Requirements

None.

Chart

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Emissions Unit ID: F003

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> | OAC rule 3745-17-11 |
|---|--------------------------------------|------------------------|
| F003 - Charge handling of steel scrap Handling of steel scrap is conducted inside of a building. | OAC rule 3745-31-05(A)(3) | |
| | OAC rule 3745-31-10 thru 20 | OAC rule 3745-17-08(B) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |
| | OAC rule 3745-17-07(B)(1) | |

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Emissions Unit ID: F003

Applicable Emissions
Limitations/Control
Measures

The requirements of this rule also include compliance with the requirements and 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

See section A.2.a below

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 emission limitation specified by this rule is less stringent than the 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).

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Emissions Unit ID: F003

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. The permittee shall prepare and submit to the Cleveland DAQ for review, a Scrap Management Program (SMP) to allow the minimal use of scrap charged in the EAF that contains mercury, lead, oils, plastics, and organic materials. The SMP shall be viewed

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Emissions Unit ID: F003

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as an operational restriction for the EAF. Prior to operation under this permit modification, the permittee shall obtain an approved SMP, which shall be updated as needed in conjunction with the Title V permit renewal process. Any future change to the SMP that would increase the amount of these compounds present in the scrap, or result in the emissions of an air contaminant not previously emitted, must be approved by the Cleveland DAQ.

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:

Emissions Unit ID: F003

2.52 lbs/hr of PM/PM10 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/PM10 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.

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Emissions Unit ID: F003

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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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

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

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Emissions Unit ID: F003

None.

VI. Miscellaneous Requirements

None.

Chart

PTI A

Modification Issued: 2/12/2008

Emissions Unit ID: F004

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> | 40 CFR Part 60 Subpart AAa |
|--|--------------------------------------|----------------------------|
| 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) | |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-31-10 thru 20 | |
| MODIFIED | OAC rule 3745-17-11(B) | |
| | OAC rule 3745-17-07(A) | |

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Emissions Unit ID: F004

Applicable Emissions
Limitations/Control
Measures

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.

0.01 grain/dry standard cubic feet of exhaust gases
and 0.10 pounds/hour
and 0.45 TPY of PM/PM₁₀
emissions

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).

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.

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

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Emissions Unit ID: F004

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:

Chart

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Emissions Unit ID: F004

Visible PE shall not exceed 10% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

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).

Chart**PTI A**

Emissions Unit ID: F004

Modification Issued: 2/12/2008

- 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.

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Facility ID: 131817162

Emissions Unit ID: F004

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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

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.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P032

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> |
|--|--------------------------------------|
| P032 - number 1 natural gas fired tundish preheater rated at 12.0 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P032

| <u>Applicable Emissions Limitations/Control Measures</u> | |
|--|---|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.007 lb/hr and 0.03 ton/year. | 0.57 ton/year. See section A.2.b below. |
| 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). | 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). |
| PM/PM ₁₀ emissions shall not exceed 0.09 lb/hr and 0.39 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.99 lb/hr and 4.33 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Nitrogen oxide (NO _x) emissions shall not exceed 1.18 lbs/hr and 5.17 tons/year. | See Section A.2.a. below. |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.06 lb/hr and 0.26 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.13 lb/hr and | |

Chart**PTI A**

Emissions Unit ID: P032

Modification Issued: 2/12/2008**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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x 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

Emissions Unit ID: P032

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 0.09 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 (0.0118 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:

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0.39 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 0.99 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 (0.0118 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:
4.33 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 1.18 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 (0.0118 mm cu. ft./hr). The emission factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of

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Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

**Chart
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Emissions Unit ID: P032

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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:
5.17 TPY of NO_x 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 0.06 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 (0.0118 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:
0.26 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:
SO₂ emissions shall not exceed 0.007 lb/hr.

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Emissions Unit ID: P032

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0118 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).

Chart**PTI A**

Emissions Unit ID: P032

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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 SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ 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 0.13 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 (0.0118 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:
0.57 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 12.0 mmBtu/hr This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Modification Issued: 2/12/2008

Emissions Unit ID: P032

None.

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Emissions Unit ID: P033

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> |
|--|--------------------------------------|
| P033 - number 2 natural gas fired tundish preheater rated at 12.0 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

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Emissions Unit ID: P033

| Applicable Emissions <u>Limitations/Control</u> <u>Measures</u> | 0.57 ton/year. |
|--|--|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.007 lb/hr and 0.03 ton/year. | See section A.2.b below. |
| 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). | See section A.2.c. below. |
| PM/PM ₁₀ emissions shall not exceed 0.09 lb/hr and 0.39 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.99 lb/hr and 4.33 tons/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Nitrogen oxide (NO _x) emissions shall not exceed 1.18 lbs/hr and 5.17 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.06 lb/hr and 0.26 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.13 lb/hr and | See Section A.2.a. below. |

Modification Issued: 2/12/2008

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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

Charter Steel**PTI Application: 13-04176****Modification Issued: 2/12/2008****Facility ID: 131817162**

Emissions Unit ID: P033

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 0.09 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 (0.0118 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:
0.39 TPY of PM/PM10 emissions

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Emissions Unit ID: P033

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 0.99 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 (0.0118 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:**
4.33 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 1.18 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 (0.0118 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).

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**Chart
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Emissions Unit ID: P033

Modification Issued: 2/12/2008

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:
5.17 TPY of NO_x 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 0.06 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 (0.0118 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:
0.26 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:
SO₂ emissions shall not exceed 0.007 lb/hr.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P033

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0118 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).

Chart**PTI A**

Emissions Unit ID: P033

Modification Issued: 2/12/2008

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 SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ 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 0.13 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 (0.0118 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:
0.57 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.

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PTI Application: 13-04176

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Emissions Unit ID: P033

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

| <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 12.0 mmBtu/hr This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Emissions Unit ID: P033

None.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P034

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> |
|--|--------------------------------------|
| P034 - number 3 natural gas fired tundish preheater rated at 12.0 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P034

| Applicable Emissions Limitations/Control Measure | 0.57 ton/year. |
|--|---|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.007 lb/hr and 0.03 ton/year. | See section A.2.b below. |
| 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). | 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). |
| PM/PM ₁₀ emissions shall not exceed 0.09 lb/hr and 0.39 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.99 lb/hr and 4.33 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Nitrogen oxide (NO _x) emissions shall not exceed 1.18 lbs/hr and 5.17 tons/year. | See Section A.2.a. below. |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.06 lb/hr and 0.26 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.13 lb/hr and | |

Chart**PTI A**

Emissions Unit ID: P034

Modification Issued: 2/12/2008**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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

Emissions Unit ID: P034

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 0.09 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 (0.0118 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:
0.39 TPY of PM/PM₁₀ emissions

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Emissions Unit ID: P034

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 0.99 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 (0.0118 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:**
4.33 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 1.18 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 (0.0118 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).

Charter Steel

PTI Application: 13-04176

Modification Issued: 2/12/2008

Facility ID: 131817162

Emissions Unit ID: P034

**Chart
PTI A**

Emissions Unit ID: P034

Modification Issued: 2/12/2008

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:
5.17 TPY of NO_x 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 0.06 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 (0.0118 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:
0.26 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:
SO₂ emissions shall not exceed 0.007 lb/hr.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P034

Applicable Compliance Methods:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.0118 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).

Chart**PTI A**

Emissions Unit ID: P034

Modification Issued: 2/12/2008

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 SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ 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 0.13 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 (0.0118 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:
0.57 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 12.0 mmBtu/hr This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Modification Issued: 2/12/2008

Emissions Unit ID: P034

None.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P035

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> |
|--|--------------------------------------|
| P035 - number 1 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P035

| Applicable Emissions <u>Limitations/Control</u> <u>Measures</u> | 0.44 ton/year. |
|--|---|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year. | See section A.2.b below |
| 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). | 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). |
| PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year. | See Section A.2.a. below. |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.10 lb/hr and | |

Modification Issued: 2/12/2008

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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

Emissions Unit ID: P035

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

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Emissions Unit ID: P035

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).

Charter Steel

PTI Application: 13-04176

Modification Issued: 2/12/2008

Facility ID: 131817162

Emissions Unit ID: P035

**Chart
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Emissions Unit ID: P035

Modification Issued: 2/12/2008

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 NO_x 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:
SO₂ emissions shall not exceed 0.006 lb/hr.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P035

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/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).

Chart**PTI A**

Emissions Unit ID: P035

Modification Issued: 2/12/2008

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 SO₂ emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ 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.

Charter Steel

Facility ID: 131817162

PTI Application: 13-04176

Modification Issued: 2/12/2008

Emissions Unit ID: P035

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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

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

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Modification Issued: 2/12/2008

Emissions Unit ID: P035

None.

Chart

PTI A

Modification Issued: 2/12/2008

Emissions Unit ID: P036

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> |
|--|--------------------------------------|
| P036 - number 2 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P036

| <u>Applicable Emissions Limitations/Control Measures</u> | |
|--|---|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year. | 0.44 ton/year. See section A.2.b below |
| 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). | 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). |
| PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year. | See Section A.2.a. below. |
| Volatile organic compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.10 lb/hr and | |

Modification Issued: 2/12/2008

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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

Emissions Unit ID: P036

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

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Emissions Unit ID: P036

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).

Charter Steel

PTI Application: 13-04176

Modification Issued: 2/12/2008

Facility ID: 131817162

Emissions Unit ID: P036

Chart**PTI A**

Emissions Unit ID: P036

Modification Issued: 2/12/2008

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 NO_x 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:
SO₂ emissions shall not exceed 0.006 lb/hr.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P036

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/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).

Chart**PTI A**

Emissions Unit ID: P036

Modification Issued: 2/12/2008

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 SO₂ emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ 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 This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Modification Issued: 2/12/2008

Emissions Unit ID: P036

None.

Chart

PTI A

Modification Issued: 2/12/2008

Emissions Unit ID: P037

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> |
|--|--------------------------------------|
| P037 - number 3 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

Chart

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Modification Issued: 2/12/2008

Emissions Unit ID: P037

| Applicable Emissions Limitations/Control Measures | 0.44 ton/year. |
|--|--|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year. | See section A.2.b below |
| 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). | See section A.2.c below |
| PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.10 lb/hr and | See Section A.2.a. below. |

Chart**PTI A**

Emissions Unit ID: P037

Modification Issued: 2/12/2008**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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

Charter Steel**Facility ID: 131817162****PTI Application: 13-04176****Modification Issued: 2/12/2008**

Emissions Unit ID: P037

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

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Emissions Unit ID: P037

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).

Charter Steel

PTI Application: 13-04176

Modification Issued: 2/12/2008

Facility ID: 131817162

Emissions Unit ID: P037

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Emissions Unit ID: P037

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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 NO_x 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:
SO₂ emissions shall not exceed 0.006 lb/hr.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P037

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/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).

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Emissions Unit ID: P037

Modification Issued: 2/12/2008

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 SO₂ emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ 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 This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Modification Issued: 2/12/2008

Emissions Unit ID: P037

None.

Chart

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Modification Issued: 2/12/2008

Emissions Unit ID: P038

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> |
|--|--------------------------------------|
| P038 - number 4 natural gas fired ladle preheater and dryer rated at 10 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

Chart

PTI A

Modification Issued: 2/12/2008

Emissions Unit ID: P038

| Applicable Emissions Limitations/Control Measures | 0.44 ton/year. |
|--|---|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.006 lb/hr and 0.03 ton/year. | See section A.2.b below |
| 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). | 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). |
| PM/PM ₁₀ emissions shall not exceed 0.074 lb/hr and 0.32 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.82 lb/hr and 3.59 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Nitrogen oxide (NO _x) emissions shall not exceed 0.98 lb/hr and 4.29 tons/year. | See Section A.2.a. below. |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.05 lb/hr and 0.24 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.10 lb/hr and | |

Chart**PTI A**

Emissions Unit ID: P038

Modification Issued: 2/12/2008**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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

Charter Steel**PTI Application: 13-04176****Modification Issued: 2/12/2008****Facility ID: 131817162**

Emissions Unit ID: P038

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

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P038

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).

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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 NO_x 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:
SO₂ emissions shall not exceed 0.006 lb/hr.

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Emissions Unit ID: P038

Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/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).

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Emissions Unit ID: P038

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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 SO₂ emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ 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.

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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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

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

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Emissions Unit ID: P038

None.

Chart

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Emissions Unit ID: P041

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> |
|--|--------------------------------------|
| P041 - 4 natural gas fueled cut-off torches rated at 1.76 mmBtu/hr each for a total of 7.04 mmBtu/hr | OAC rule 3745-31-05(A)(3) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-17-07(A)(1) |
| MODIFIED | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-10(B)(1) |
| | OAC rule 3745-18-06(A) |
| | OAC rule 3745-21-08(B) |
| | OAC rule 3745-23-06(B) |

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Emissions Unit ID: P041

| Applicable Emissions <u>Limitations/Control</u> <u>Measures</u> | 0.35 ton/year. |
|--|---|
| Sulfur dioxide (SO ₂) emissions shall not exceed 0.004 lb/hr and 0.01 ton/year. | See section A.2.b below |
| 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). | 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). |
| PM/PM ₁₀ emissions (PE) shall not exceed 0.05 lb/hr and 0.23 ton/year. | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| Carbon monoxide (CO) emissions shall not exceed 0.59 lb/hr and 2.58 tons/year. | Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas |
| Nitrogen oxide (NO _x) emissions shall not exceed 0.70 lb/hr and 3.1 tons/year. | See Section A.2.a. below. |
| Volatile Organic Compounds (VOC) emissions shall not exceed 0.04 lb/hr and 0.18 ton/year. | See Section A.2.a. below. |
| Organic compound (OC) emissions shall not exceed 0.08 lb/hr and | |

Chart**PTI A**

Emissions Unit ID: P041

Modification Issued: 2/12/2008**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-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x limitation of 100 lb of NO_x/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

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Emissions Unit ID: P041

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 0.05 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 (0.007 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:
0.23 TPY of PM/PM10 emissions

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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 0.59 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 (0.007 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:**
2.58 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 0.70 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 (0.007 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).

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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:
3.1 TPY of NO_x 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 0.04 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 (0.007 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:
0.18 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:
SO₂ emissions shall not exceed 0.004 lb/hr.

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Applicable Compliance Method:

When firing natural gas, compliance shall be determined by multiplying an emission factor of 0.6 lb of SO₂/mm cu. ft. by the emissions unit's maximum hourly natural gas firing rate (0.007 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).

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Emissions Unit ID: P041

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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:
0.01 TPY of SO₂ emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly SO₂ 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 0.08 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 (0.007 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:
0.35 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 - 4 natural gas fueled cut-off torches rated at 1.76 mmBtu/hr each for a total of 7.04 mmBtu/hr This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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None.

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| | | <u>Applicable Emissions Limitations/Control Measures</u> |
|---------------------------|------------------------|---|
| | OAC rule 3745-21-08(B) | Flare combustion emissions: |
| | OAC rule 3745-23-06(B) | Sulfur dioxide (SO ₂) emissions shall not exceed 0.009 lb/hr and 0.04 TPY |
| | | The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20). |
| | | no visible particulate emissions. |
| | | Flare combustion emissions: |
| | | PM/PM ₁₀ emissions shall not exceed 0.12 lbs/hr and 0.52 TPY |
| | | Nitrogen oxide (NO _x) emissions shall not exceed 1.57 lbs/hr and 6.87 TPY |
| OAC rule 3745-17-11(B) | | Carbon monoxide (CO) emissions shall not exceed 1.32 lbs/hr and 5.78 TPY |
| | | Volatile organic compounds (VOC) emissions shall not exceed 0.09 lbs/hr and 0.39 TPY |
| OAC rule 3745-17-10(B)(1) | | 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 and 82.8 TPY |
| | | |
| OAC rule 3745-17-07(A) | | |

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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

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

See Section A.2.b. below.

See Section A.2.b. below.

2. Additional Terms and Conditions

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Emissions Unit ID: P043

- 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.

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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_x, CO, PM/PM₁₀, 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

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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.

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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

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Emissions Unit ID: P043

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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).

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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 NO_x 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.

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Emissions Unit ID: P043

- j. Emission Limitation:
flare combustion
SO₂ 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 SO₂/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 SO₂ emissions

Applicable Compliance Method(s):

The ton per year limitation was developed by multiplying the hourly SO₂ 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

Chart**PTI A**

Emissions Unit ID: P043

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established through the compliance demonstration in A.V.1.l 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 (150 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 emissions unit.

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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.

Chart

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Emissions Unit ID: P043

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P043 - 150 TPH capacity Vacuum Oxygen Degasser (VOD) vessel This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Emissions Unit ID: P043

None.

VI. Miscellaneous Requirements

None.

Chart

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Emissions Unit ID: P044

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <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 This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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 |
| | OAC rule 3745-17-11(B) | Visible particulate emissions shall not exceed 10% opacity, as a 6-minute average. See A.2.a |
| | 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). The emission limitation specified by this rule is less stringent than the |

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Emissions Unit ID: P044

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:

Chart

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Emissions Unit ID: P044

- a. Emission Limitation:
Visible PE shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

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 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour

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Emissions Unit ID: P044

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> |
|---|--------------------------------------|--|
| P044 - Carbon silo - storage of carbon additive for steel alloying This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Emissions Unit ID: P044

None.

Chart

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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 This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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. |
| | 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 emission limitation specified by this rule is less stringent than the emission limitation established |

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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.

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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:

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 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour

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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.

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Emissions Unit ID: P045

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <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 This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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

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Emissions Unit ID: P045

None.

VI. Miscellaneous Requirements

None.

Chart

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Emissions Unit ID: P046

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 - 6 cooling towers with a total throughput of 25,000 gpm and 1.5 MMgallons/hr for cooling of process water This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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 |

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Emissions Unit ID: P046

OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions**2.a** None.**II. Operational Restrictions**

1. The total water flow rate of the cooling towers 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 towers 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 towers 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 towers water flow rate, in gallons per minute, at a minimum frequency of once/day.
2. The permittee shall sample the cooling towers water monthly to adequately demonstrate compliance with the monthly average concentration of total dissolved solids (TDS) limitation.
3. The permittee shall sample the cooling towers 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 towers water flow rate exceeds 25,000 gpm;
 - b. the monthly average concentration of total dissolved solids (TDS) in the cooling towers water exceeds 5,682 mg/gallon; and

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- c. the monthly average concentration of organics in the cooling towers 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.

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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

$(25,000 \text{ gal/min}) \times (0.008/100) = 2 \text{ gal/min or } 454.2 \text{ liters/hr}$

solids concentration of make up water (mg/liter) x number of concentration cycles for the cooling towers
= 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:

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circulation rate (gal/min) x drift factor (%) = Drift Rate

(25,000 gal/min) x (0.008/100) = 2 gal/min or 454.2 liters/hr

organic concentration of make up water (mg/liter) x number of concentration cycles for the cooling towers

= TOC

50 mg/liter x 3 = 150 mg/liter

Drift rate x TOC x 1 lb/453,592 mg = 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.

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Modification Issued: 2/12/2008

Emissions Unit ID: P046

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 - 6 cooling towers with a total throughput of 25,000 gpm and 1.5 MMgallons/hr for cooling of process water This PTI supercedes PTI 13-04176 issued on June 10, 2004. MODIFIED | 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.

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Emissions Unit ID: P046

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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PTI A

Modification Issued: 2/12/2008

Emissions Unit ID: P900

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> |
|---|--------------------------------------|
| 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) |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-31-05(C) |
| MODIFIED | OAC rule 3745-17-07 (A)(1) |
| | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-11(B) |

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| | <u>Applicable Emissions Limitations/Control Measures</u> | |
|--|--|---|
| <p>OAC rule 3745-18-06(E)(1)</p> | <p>Sulfur dioxide (SO₂) emissions shall not exceed 22.0 lbs/hr.</p> <p>Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY.</p> | <p>lb/hr and 1.78 TPY</p> <p>Total for meltshop baghouse See sections A.I.2.a and A.I.2.b.</p> <p>See section A.I.2.d</p> <p>71.06 tons of SO₂ per rolling 12-month period.</p> |
| <p>NSPS 40 CFR Part 60 Subpart AAa</p> | <p>Total for meltshop baghouse See sections A.I.2.a and A.I.2.c.</p> <p>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.</p> <p>Emissions from the EAF shall not exceed the following: PM/PM₁₀ emissions shall not exceed 12.43 lbs/hr and 40.15 TPY</p> <p>Nitrogen oxide (NO_x) emissions shall not exceed 36.29 lbs/hr and 117.25 TPY</p> <p>Carbon monoxide (CO) emissions shall not exceed 356.4 lbs/hr and 1,151.2 TPY</p> <p>Volatile organic compounds (VOC) emissions shall not exceed 22.0 lbs/hr and 71.06 TPY</p> <p>Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.55</p> | <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>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).</p> <p>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).</p> |

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2. Additional Terms and Conditions

- 2.a** The emissions from sources P032-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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** Visible emissions of fugitive dust from the meltshop building shall not exceed 6 percent opacity

- 2.c** 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.d** The permittee is required to perform a Best Available Control Technology (BACT) review for NO_x, CO, PM/PM₁₀, 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/PM10- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

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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 |

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| | |
|------|---------|
| 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 permittee shall prepare and submit to the Cleveland DAQ for review, a Scrap Management Program (SMP) to allow the minimal use of scrap charged in the EAF that contains mercury, lead, oils, plastics, and organic materials. The SMP shall be viewed as an operational restriction for the EAF. Prior to operation under this permit modification, the permittee shall obtain an approved SMP, which shall be updated as needed in conjunction with the Title V permit renewal process. Any future change to the SMP that would increase the amount of these compounds present in the scrap, or result in the emissions of an air contaminant not previously emitted, must be approved by the Cleveland DAQ.

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.
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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). This limit is for visible emissions of fugitive dust from the meltshop building].

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.

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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;

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- 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

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- 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

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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/PM10 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).

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- b. Emission Limitation:
40.15 TPY of PM/PM10 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 SO2 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 SO2 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 NOx 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 NOx 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

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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)

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and (1-0.99) which is the control efficiency for the baghouse system.

- I. 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:
20.28 lbs/hr, 0.0024 grains/dscf of PM/PM10 emissions Meltshop baghouse

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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:
242.06 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:
99.31 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:
47.28 lbs/hr of NOx emissions Meltshop baghouse

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Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- s. Emission Limitation:
163.51 TPY of NO_x emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NO_x 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:
397.23 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:
1,292.46 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:
22.70 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:
73.95 TPY of VOC emissions Meltshop baghouse

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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

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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

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:
 $110 \text{ tons/hr} \times 0.000476 \text{ lb Hg/ton} = 0.052 \text{ lb Hg/hr}$.

Compliance shall be based upon the results of the emission testing specified in section A.V.2

- bb. Emission Limitation:
0.17 TPY of Mercury (Hg) emissions Meltshop baghouse

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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 emissions unit will be operated, but no later than 180 days after initial start-up of the emissions unit. The emission testing shall be conducted to demonstrate compliance with the SO₂, NO_x, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

The test(s) shall be conducted while emissions units P032-P038, P041, P047 and P900-P902 are operating simultaneously at or near their maximum capacity, unless otherwise specified or approved by the Cleveland DAQ. The tests shall be conducted in accordance with the requirements of 40 CFR Part 60.275a.

During the particulate emission testing, the permittee shall obtain the following additional information:

- a. the pressure in the free space inside the furnace shall be determined during the melting and refining period(s) using the monitoring devices required under Condition III.3.a of this permit unless alternative monitoring is approved by U.S. EPA; and
- b. the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the EAFs.

During performance tests, the permittee shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector unless the amount of dilution is separately determined and considered in the determination of emissions.

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 SO₂, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x 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

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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

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Emissions Unit ID: P900

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

Chart

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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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

2. Additional Terms and Conditions

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

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Emissions Unit ID: P900

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Chart

PTI A

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Emissions Unit ID: P901

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> |
|---|--------------------------------------|
| P901 - LMF - Ladle Metallurgy Furnace, 110 TPH capacity, for alloy mixing and re-sulfurization of molten steel This PTI supercedes PTI 13-04176 issued on June 10, 2004. | OAC rule 3745-31-05(A)(3) |
| MODIFIED | OAC rule 3745-31-05(C) |
| | OAC rule 3745-31-10 thru 20 |
| | OAC rule 3745-17-07 (A)(1) |

Chart**PTI A**

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| OAC rule 3745-17-07 (B)(3) | <u>Applicable Emissions Limitations/Control Measures</u> | lb/hr and 0.07 TPY |
|-------------------------------|---|---|
| | Sulfur dioxide (SO ₂) emissions shall not exceed 220.0 lbs/hr during the production of resulfurized grade steel. | See section A.2.a See section A.2.b |
| OAC rule 3745-17-11 | Sulfur dioxide (SO ₂) emissions shall not exceed 22.0 lbs/hr during the production of all other grades of steel. | 28.0 tons of SO ₂ per rolling 12-month period, during the production of resulfurized grade steel. 71.06 tons of SO ₂ per rolling 12-month period, during the production of all other grades of steel. |
| OAC rule 3745-18-06(E)(1) | <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> <p>Emissions from the LMF shall not exceed the following: PM/PM₁₀ emissions shall not exceed 2.20 lbs/hr and 7.20 TPY</p> <p>Nitrogen oxide (NO_x) 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</p> | <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> |

Modification Issued: 2/12/2008**2. Additional Terms and Conditions**

- 2.a** The emissions from sources P032-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x, CO, PM/PM₁₀, 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/PM₁₀- 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.

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Emissions Unit ID: P901

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 |

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Emissions Unit ID: P901

| | |
|------|---------|
| 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.

Chart**PTI A**

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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

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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:

**Chart
PTI A**

Emissions Unit ID: P901

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- 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 SO2 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 SO2 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 NOx emissions P901

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Emissions Unit ID: 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 NOx 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).

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Emissions Unit ID: P901

- 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) emission 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:
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:
20.28 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

Chart**PTI A**

Emissions Unit ID: P901

Modification Issued: 2/12/2008**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:
242.06 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:
99.31 TPY of SO₂ emissions Meltshop baghouse

**Chart
PTI A**

Emissions Unit ID: P901

Modification Issued: 2/12/2008**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:
47.28 lbs/hr of NO_x 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:
163.51 TPY of NO_x emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NO_x 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:
397.23 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:
1,292.46 TPY of CO emissions Meltshop baghouse

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Emissions Unit ID: P901

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.

**Chart
PTI A**

Emissions Unit ID: P901

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- v. Emission Limitation:
22.70 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:
73.95 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.

Chart

PTI A

Emissions Unit ID: P901

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- z. Emission Limitation:
22.0 lbs/hr of SO₂ 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).

**Chart
PTI A**

Emissions Unit ID: P901

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- aa. Emission Limitation:
71.06 tons of SO₂ 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:
 $110 \text{ tons/hr} \times 0.000476 \text{ lb Hg/ton} = 0.052 \text{ lb Hg/hr}$.

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 emissions unit will be operated, but no later than 180 days after initial start-up of the emissions unit. The emission testing shall be conducted to demonstrate compliance with the SO₂, NO_x, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

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Emissions Unit ID: P901

The test(s) shall be conducted while emissions units P032-P038, P041, P047 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 SO₂, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x 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.

Chart**PTI A****Modification Issued: 2/12/2008**

Emissions Unit ID: P901

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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

2. Additional Terms and Conditions**2.a** None.**II. Operational Restrictions**

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

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None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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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> | |
|---|--------------------------------------|---------------------------|
| P902 - Continuous caster of steel | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-08 |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | OAC rule 3745-17-11 |
| MODIFIED | OAC rule 3745-31-10 thru 20 | |
| | | OAC rule 3745-18-06(E)(1) |
| | OAC rule 3745-17-07(A)(1) | |
| | OAC rule 3745-17-07(B)(3) | |

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Applicable Emissions
Limitations/Control
Measures

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.

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

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

reasonable available control measures for control of emissions of fugitive dust

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

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Modification Issued: 2/12/2008**2. Additional Terms and Conditions**

- 2.a** The emissions from sources P032-P038, P041, P047 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 20.28 lbs/hr or 0.0024 grains/dscf and 88.85 TPY

Sulfur dioxide (SO₂) emissions shall not exceed 242.06 lbs/hr and 99.31 TPY

Nitrogen oxide (NO_x) emissions shall not exceed 47.28 lbs/hr and 163.51 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,292.46 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 73.95 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_x, CO, PM/PM₁₀, 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/PM₁₀- 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.

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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.

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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

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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)

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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:
20.28 lbs/hr, 0.0024 grains/dscf of PM/PM10 emission 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:
242.06 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:
99.31 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

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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:
47.28 lbs/hr of NO_x 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:
163.51 TPY of NO_x emissions Meltshop baghouse

Applicable Compliance Method:

The ton per year limitation was developed by dividing the lb/hr NO_x 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:
397.23 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:
1,292.46 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:
22.70 lbs/hr of VOC emissions Meltshop baghouse

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Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in section A.V.2.

- I. Emission Limitation:
73.95 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.

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Applicable Compliance Method:

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:
 $110 \text{ tons/hr} \times 0.000476 \text{ lb Hg/ton} = 0.052 \text{ lb Hg/hr}$.

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:
 $710,600 \text{ tons/yr} \times 0.000476 \text{ lb Hg/ton} \times$

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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 emissions unit will be operated, but no later than 180 days after initial start-up of the emissions unit. The emission testing shall be conducted to demonstrate compliance with the SO₂, NO_x, CO, VOC, Lead (Pb), Mercury (Hg) and particulate emission limitations.

The test(s) shall be conducted while emissions units P032-P038, P041, P047 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 SO₂, Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A for NO_x 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

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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.

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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. |
| This PTI supercedes PTI 13-04176 issued on June 10, 2004. | | |
| MODIFIED | | |

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

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None.

VI. Miscellaneous Requirements

None.