



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

3/10/2011

Certified Mail

Tammy Bukach
Charter Steel - Cleveland Inc
4300 East 49th Street
Cuyahoga Heights, OH 44125-1004

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1318171623
Permit Number: P0107543
Permit Type: Administrative Modification
County: Cuyahoga

No	TOXIC REVIEW
Yes	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director 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, made payable to "Ohio Treasurer Josh Mandel," 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

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Cleveland Division of Air Quality. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
CDAQ; Pennsylvania; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Charter Steel - Cleveland Inc**

Facility ID: 1318171623
Permit Number: P0107543
Permit Type: Administrative Modification
Issued: 3/10/2011
Effective: 3/10/2011



Division of Air Pollution Control
Permit-to-Install
for
Charter Steel - Cleveland Inc

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Authorization

Facility ID: 1318171623
Facility Description: Steel Billet manufacturing.
Application Number(s): M0001077
Permit Number: P0107543
Permit Description: Administrative modification of PTI 13-4176 for emissions units P032, P033, P034, P900, P901 and P902 to accurately reflect where the SO2 emissions are being generated during the steel meltshop process.
Permit Type: Administrative Modification
Permit Fee: \$1,725.00
Issue Date: 3/10/2011
Effective Date: 3/10/2011

This document constitutes issuance to:

Charter Steel - Cleveland Inc
4300 East 49th Street
Cuyahoga Heights, OH 44125-1004

of a Permit-to-Install for the emissions unit(s) identified on the following page.

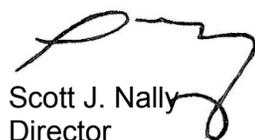
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114
(216)664-2297

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0107543
Permit Description: Administrative modification of PTI 13-4176 for emissions units P032, P033, P034, P900, P901 and P902 to accurately reflect where the SO2 emissions are being generated during the steel meltshop process.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID: P900
Company Equipment ID: Electric Arc Furnace
Superseded Permit Number: 13-04176
General Permit Category and Type: Not Applicable

Emissions Unit ID: P901
Company Equipment ID: Ladle Metallurgy Furnace
Superseded Permit Number: 13-04176
General Permit Category and Type: Not Applicable

Emissions Unit ID: P902
Company Equipment ID: Continuous Caster
Superseded Permit Number: 13-04176
General Permit Category and Type: Not Applicable

Group Name: 12.0 mmBtu/hr tundish preheaters

Emissions Unit ID:	P032
Company Equipment ID:	Tundish Preheater #1
Superseded Permit Number:	13-04176
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P033
Company Equipment ID:	Tundish Preheater #2
Superseded Permit Number:	13-04176
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P034
Company Equipment ID:	Tundish Preheater #3
Superseded Permit Number:	13-04176
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) 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:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Cleveland Division of Air Quality.
 - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Cleveland Division of Air Quality. 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 A.15. below if no deviations occurred during the quarter.

- (3) 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 Cleveland Division of Air Quality 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.
 - (4) This permit is for an emissions unit located at a Title V facility. 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.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Cleveland Division of Air Quality 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).

6. Compliance Requirements

- a) 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.
- b) 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.
- c) 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:
 - (1) 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.
 - (2) 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.

- (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) 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.
- d) The permittee shall submit progress reports to the Cleveland Division of Air Quality 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:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. 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 Cleveland Division of Air Quality.
- 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 Cleveland Division of Air Quality. 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.)

10. 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).

11. Construction of New Sources(s) and Authorization to Install

- a) 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.
- b) If applicable, authorization to install any new 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 has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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.

16. 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.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. 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.

19. 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.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions

1. P900, Electric Arc Furnace

Operations, Property and/or Equipment Description:

110 TPH capacity Electric Arc Furnace (EAF) with direct evacuation control (DEC) for capture and a baghouse for control of emissions. MODIFIED

This PTI supercedes PTI 13-04176 issued on February 12, 2008.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>Sulfur dioxide (SO₂) emissions shall not exceed 220.0 lbs/hr during the production of resulfurized grade steel.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 22.0 lbs/hr during the production of all other grades of steel.</p> <p>Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY.</p> <p>Total for meltshop baghouse See b)(2)a. and b)(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>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-10 thru 20	<p>Emissions from the EAF shall not exceed the following:</p> <p>PM/PM10 emissions shall not exceed 12.43 lbs/hr and 40.15 TPY</p> <p>Nitrogen oxide (NOx) 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 lb/hr and 1.80TPY</p> <p>Total for meltshop baghouse See b)(2)a. and b)(2)b.</p> <p>See b)(2)d.</p>
c.	OAC rule 3745-31-05(C)	<p>28.0 tons of SO₂ per rolling 12-month period, during the production of resulfurized grade steel.</p> <p>71.06 tons of SO₂ per rolling 12-month period, during the production of all other grades of steel.</p>
d.	OAC rule 3745-17-07 (A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-18-06(E)(1)	The sulfur dioxide emission limitation specified by this rule is less stringent than the sulfur dioxide emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	NSPS 40 CFR Part 60 Subpart AAa	<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 particulate emission limitation specified by this rule is equivalent to the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>

(2) Additional Terms and Conditions

- 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 92.56 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 165.42 TPY
 - Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,330.00 TPY
 - Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 74.20 TPY
 - Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.80 TPY
 - Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY
 - 3 percent opacity from the meltshop baghouse stack exit
- b. Visible emissions of fugitive dust from the meltshop building shall not exceed 6 percent opacity.
- 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.

- 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

Lead - Use of a baghouse with an emission limit of 0.000065 gr/dscf of exhaust gases

NO_x- Use of DEC Direct Evacuation Control (DEC) system, low NO_x 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

c) 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.
- (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.
- (5) 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. 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.

- (6) 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]

d) Monitoring and/or Recordkeeping Requirements

- (1) The following are requirements of the NSPS Subpart AAa. Observations of the opacity of the visible emissions from the meltshop baghouse shall be performed by a certified visible emission observer as follows:

- a. Visible emission observations shall be conducted at least once per day of operation. The observations shall occur when the furnace is operating in the charging, melting, tapping and refining period. These observations shall be taken in accordance with Method 9 of 40 CFR Part 60, Appendix A and, for at least three 6-minute periods, the opacity shall be recorded for point(s) where the greatest opacity visible emissions are observed, and that portion of the plume where the condensed water phase is not present in accordance with the procedures listed in Method 9 of 40 CFR Part 60, Appendix A. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emission, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the limitation for visible particulate emissions.

The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.

- (2) In accordance with NSPS Subpart AAa, observations of the opacity of the visible emissions from the shop shall be performed by a certified visible emission observer as follows:

- a. Visible emission observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period. Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one observation of shop opacity

will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. The owner or operator shall maintain records of all shop observations made in accordance with the above requirements. The appropriate records shall be maintained in the permittee's files to identify the persons responsible for conducting the opacity readings and to verify that the Method 9 certifications are up to date for the responsible individuals.

- (3) The permittee shall monitor the operation of the furnace control systems and maintain records in accordance with the following requirements:
- a. The permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The monitoring device may be installed in any appropriate location in the EAF ducts prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of plus or minus 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions. The pressure determined during the most recent compliance demonstration shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Ohio EPA, Division of Air Pollution Control (DAPC) to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of the 15-minute integrated average of the pressure whenever the permittee can demonstrate to the Agency's satisfaction that EAF operating conditions upon which the pressures were previously established are no longer applicable;
 - b. The permittee shall check and record on a once-per-shift basis the furnace static pressure and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. The monitoring device may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring devices shall have an accuracy of plus or minus 10 percent over their normal operating range and shall be calibrated according to the manufacturer's instructions. The Ohio EPA, DAPC may require the permittee to demonstrate the accuracy of the monitoring devices relative to Methods 1 and 2 of Appendix A of 40 CFR Part 60. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate levels for each applicable period. Operation at other than baseline values will be considered by the Ohio EPA, DAPC to be unacceptable operation and maintenance of the control system. The permittee may petition the Ohio EPA for reestablishment of these parameters whenever the permittee can demonstrate to the Agency's satisfaction that the operating conditions upon which the parameters were previously established are no longer applicable;
 - c. The permittee shall perform and maintain records of the monthly operational status inspections of the equipment that is important to the performance of the total capture systems (i.e., pressure sensors, dampers, and damper switches).

This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion.) Any deficiencies shall be recorded and proper maintenance performed. The permittee may petition the Ohio EPA, DAPC to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system; and,

- d. Upon approval by the U.S. EPA, an alternative method may be established to replace the monitoring and recordkeeping requirements found in 3.a, 3.b, and 3.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 maintain production records for the emissions unit 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 and the rolling, 12-month summation of the steel produced during the resulfurization process.
 - (8) 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.
 - (9) 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.
 - (10) 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly written deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) of all exceedances of the opacity restrictions for the meltshop baghouse from b)(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 to the Cleveland DAQ that identify all exceedances of the static pressure values in the EAF established in d)(3)b above and either operation of control system fan motor amperes at values exceeding plus 15 percent of the values established under d)(3)b above or operation at flow rates lower than those established under d)(3)b. above.
- (3) The permittee shall submit quarterly written deviation (excursion) reports to the Cleveland DAQ 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 c)(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. Each report shall be submitted to the Cleveland DAQ within 30 days after the deviation occurs.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
220.0 lbs/hr of SO₂ emissions (resulfurization) P900

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 is multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).
 - b. Emission Limitation:
28.0 tons of SO₂ emissions per rolling 12-month period (resulfurization) P900

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 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 (other steel grades) P900

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 is 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 (other steel grades) P900

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 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).

e. 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).

f. 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).

g. Emission Limitation:

36.29 lbs/hr of NO_x 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).

h. Emission Limitation:

117.25 TPY of NO_x emissions P900

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.33 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year) and dividing by the factor of (2000 lbs/ton).

- i. 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.
- j. 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).
- k. 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).
- l. 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).
- m. Emission Limitation:
0.55 lb/hr of Lead (Pb) emissions P900
- Applicable Compliance Method:
Compliance with this emission limitation may be determined through the use of the emission factor for the EAF steel processing (0.5 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse system.
- n. Emission Limitation:
1.80 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).

- o. Emission Limitation:
Visible particulate emissions 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).
- p. Emission Limitation:
20.28 lbs/hr, 0.0024 grains/dscf of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in f)(2)..
- q. Emission Limitation:
92.56 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:
Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual PM/PM10 emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.
- r. 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 f)(2).
- s. 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 f)(1) 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:
47.28 lbs/hr of NOx emissions Meltshop baghouse

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in f)(2).

- u. Emission Limitation:
165.42 TPY of NOx emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual NOx emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- v. 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 f)(2).

- w. Emission Limitation:
1,330.00 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual CO emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- x. 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 f)(2).

- y. Emission Limitation:
74.20 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual VOC emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- z. 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 f)(2)..

- aa. Emission Limitation:
1.80 TPY of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual Pb emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- bb. Emission Limitation:
Visible particulate emissions shall not exceed 6% opacity from the EAF.

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).

- cc. 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 f)(2).

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

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual mercury emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- (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 d)(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 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.

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:

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.

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.

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.

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

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

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

g) 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

75 Erieview Plaza 2nd floor

Cleveland, Ohio 44114

2. P901, Ladle Metallurgy Furnace

Operations, Property and/or Equipment Description:

LMF - Ladle Metallurgy Furnace, 110 TPH capacity, for alloy mixing and re-sulfurization of molten steel MODIFIED

This PTI supercedes PTI 13-04176 issued on February 12, 2008

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements in OAC rules 3745-31- (10) thru (20).
b.	OAC rule 3745-31-10 thru 20	Emissions from the LMF shall not exceed the following: PM/PM10 emissions shall not exceed 2.20 lbs/hr and 9.64 TPY Nitrogen oxide (NOx) emissions shall not exceed 1.65 lbs/hr and 7.23 TPY Carbon monoxide (CO) emissions shall not exceed 33.0 lbs/hr and 144.54 TPY Volatile organic compounds (VOC) emissions shall not exceed 0.22 lbs/hr and 0.96 TPY Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.02 lb/hr and 0.09 TPY See b)(2)a. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07 (A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-07 (B)(3)	The fugitive dust emission limitation specified by this rule is less stringent than the fugitive dust emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-11	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- 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 92.56 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 165.42 TPY
- Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,330.00 TPY
- Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 74.20 TPY
- Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.80 TPY
- Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY
- 3 percent opacity from the meltshop baghouse stack exit
- 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:

- c. PM/PM10- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases

c) 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.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall monitor the baghouse control system and maintain records in accordance with the following requirements.

The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g.), presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

- (2) The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
- (3) The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.

e) Reporting Requirements

- (1) The permittee shall submit written deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the range established during the most recent emission test that demonstrated that the emissions unit was in compliance, as well as the corrective actions that were taken to achieve compliance.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:
2.20 lbs/hr of PM/PM10 emissions P901

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (2.0 lb/ton) which multiplied by the

maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.

- b. Emission Limitation:
9.64 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:
1.65 lbs/hr of NOx emissions P901
- Applicable Compliance Method:
Compliance with this emission limitation may be determined through the use of the emission factor for LMF steel processing (0.015 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour).
- d. Emission Limitation:
7.23 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).
- e. 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).
- f. Emission Limitation:
144.54 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).
- g. 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).

- h. Emission Limitation:
0.96 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).

- i. 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.

- j. Emission Limitation:
0.09 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).

- k. Emission Limitation:
Visible particulate emissions 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).

- l. 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 inf)(2).

- m. Emission Limitation:
92.56 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual PM/PM10 emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- n. **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 f)(2).

- o. **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 f)(1) 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:**
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 f)(2).

- q. **Emission Limitation:**
165.42 TPY of NO_x emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual NO_x emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- r. **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 f)(2).

- s. **Emission Limitation:**
1,330.00 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual CO emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- t. 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 f)(2).

- u. Emission Limitation:
74.20 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual VOC emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- v. 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 f)(2).

- w. Emission Limitation:
1.80 TPY of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual Pb emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- x. 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 f)(2).

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

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual Hg emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- (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 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.

g) Miscellaneous Requirements

(1) None.

3. P902, Continuous Caster

Operations, Property and/or Equipment Description:

Continuous caster of steel MODIFIED

This PTI supercedes PTI 13-04176 issued on February 12, 2008

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements and OAC rule 3745-31- (10) thru (20) and OAC rule 3745-17-08.
b.	OAC rule 3745-31-10 thru 20	Emissions from the continuous caster shall not exceed the following: PM/PM10 emissions shall not exceed 1.10 lbs/hr and 4.82 TPY See b)(2)a. See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-07(B)(3)	The fugitive dust emission limitation specified by this rule is less stringent than the fugitive dust emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-08	reasonable available control measures for control of emissions of fugitive dust.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-11	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).
g.	OAC rule 3745-18-06(E)(1)	The sulfur dioxide emission limitation specified by this rule is less stringent than the sulfur dioxide emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- 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 92.56 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 165.42 TPY
- Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,330.00 TPY
- Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 74.20 TPY
- Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.80 TPY
- Mercury (Hg) emissions shall not exceed 0.052 lb/hr and 0.17 TPY
- 3 percent opacity from the meltshop baghouse stack exit
- 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

c) 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.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall monitor the baghouse control system and maintain records in accordance with the following requirements.

The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g.), presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

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

(3) The permittee shall obtain an analysis of the Melt Shop Baghouse dust on a monthly basis. At a minimum, the samples shall be analyzed for chromium, magnesium, manganese, lead, zinc, and mercury content. The results shall be reported in weight percent. This analysis shall be conducted in accordance with U.S. EPA test methods and procedures.

e) 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.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
1.10 lbs/hr of PM/PM10 emissions P902

Applicable Compliance Method:

Compliance with this emission limitation may be determined through the use of the emission factor for the continuous casting steel processing (1.0 lb/ton) which multiplied by the maximum hourly steel process rate of the emissions unit (110 tons per hour) and (1-0.99) which is the control efficiency for the baghouse.

b. Emission Limitation:
4.82 TPY of PM/PM10 emissions P902

Applicable Compliance Method:

Compliance with this annual emission limitation may be determined through the use of the emission factor for continuous casting steel processing (1.0 lb/ton) which multiplied by the actual annual steel process rate of the emissions unit (in tons/year), (1-0.99) which is the control efficiency for the baghouse and dividing by the factor of (2000 lbs/ton).

- c. Emission Limitation:
20.28 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 f)(2).

- d. Emission Limitation:
92.56 TPY of PM/PM10 emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual PM/PM10 emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- 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 f)(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 f)(1) by the maximum process rate of the emissions unit (110 tons/hr). This lb/ton emission factor is multiplied by the annual production rate restriction (710,600 tons of steel production) and divided by the factor of 2000 pounds/ton. Compliance shall be determined by multiplying the emissions factor from the most recent stack test which demonstrated compliance by the actual annual amount of steel processed.

- g. Emission Limitation:
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 f)(2).

- h. Emission Limitation:
165.42 TPY of NO_x emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual NOx emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- 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 f)(2).

- j. Emission Limitation:
1,330.00 TPY of CO emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual CO emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

The ton per year limitation was developed by dividing the lb/hr CO emission rate established through the emissions testing requirement in f)(1) 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

Applicable Compliance Method:

Compliance shall be based upon the results of the emission testing specified in f)(2).

- l. Emission Limitation:
74.20 TPY of VOC emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual VOC emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- 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 f)(2).

- n. Emission Limitation:
1.80 TPY of Lead (Pb) emissions Meltshop baghouse

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual Pb emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- o. Emission Limitation:
Visible particulate emissions 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).

- 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 f)(2).

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

Applicable Compliance Method:

Compliance with this annual Meltshop baghouse emission limitation may be determined by a summation of actual annual Hg emissions (tons/year) from emissions units P032-P038, P041, P047, and P900-P902 using the compliance methods outlined in this permit or test results from the most recent stack test during which compliance was demonstrated.

- (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 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.

g) Miscellaneous Requirements

- (1) None.

4. Emissions Unit Group - 12.0 mmBtu/hr tundish preheaters: P032, P033, P034,

EU ID	Operations, Property and/or Equipment Description
P032	number 1 natural gas fired tundish preheater rated at 12.0 mmBtu/hr MODIFIED
P033	number 2 natural gas fired tundish preheater rated at 12.0 mmBtu/hr MODIFIED
P034	number 3 natural gas fired tundish preheater rated at 12.0 mmBtu/hr MODIFIED

This PTI supercedes PTI 13-04176 issued on February 12, 2008

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
- (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO ₂) emissions shall not exceed 0.007 lb/hr and 0.03 ton/year. The requirements of this rule also include compliance with the requirements and OAC rule 3745-31-(10) thru (20) and OAC rule 3745-18-06(A).
b.	OAC rule 3745-31-10 thru 20	PM/PM ₁₀ emissions shall not exceed 0.09 lb/hr and 0.39 ton/year. Carbon monoxide (CO) emissions shall not exceed 0.99 lb/hr and 4.33 tons/year. Nitrogen oxide (NO _x) emissions shall not exceed 1.18 lbs/hr and 5.17 tons/year. Volatile Organic Compounds (VOC) emissions shall not exceed 0.06 lb/hr and 0.26 ton/year. Organic compound (OC) emissions shall not exceed 0.13 lb/hr and 0.57 ton/year. See b)(2)a.. See b)(2)b..

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(A)(1)	The visible particulate emission limitations specified by this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-10(B)(1)	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).
e.	OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas

(2) Additional Terms and Conditions

- 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 92.56 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 165.42 TPY

Carbon monoxide (CO) emissions shall not exceed 397.23 lbs/hr and 1,330.00 TPY

Volatile organic compounds (VOC) emissions shall not exceed 22.70 lbs/hr and 74.20 TPY

Lead (Pb) emissions shall not exceed 0.000065 gr/dscf or 0.57 lb/hr and 1.80 TPY

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

3 percent opacity from the meltshop baghouse stack exit

- b. 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.

- c) Operational Restrictions
- (1) The permittee shall burn only natural gas in this emissions unit.
 - (2) The emissions from P032 through P034 shall be vented to the melt shop baghouse.
- d) 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.
- e) 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.
- f) Testing Requirements
- (1) Compliance with the emission limitation(s) in b)(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:
, 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

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).

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 NOx emissions

Applicable Compliance Method(s):

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

- h. Emission Limitation:
VOC emissions shall not exceed 0.06 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.

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).

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.

- g) Miscellaneous Requirements

- (1) None.