



State of Ohio Environmental Protection Agency

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**MAILING ADDRESS:**

P.O. Box 1049  
Columbus, OH 43216-1049

9/8/2008

**Certified Mail**

Mark Shirley  
Griffin Wheel Co. - Columbus Plant  
3900 Bixby Road  
Groveport, OH 43125

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0125100987  
Permit Number: 01-12147  
Permit Type: OAC Chapter 3745-31 Modification  
County: Franklin

Yes	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR
No	CEMS
Yes	MACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	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.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC 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 Ohio EPA DAPC, Central District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page <http://www.epa.state.oh.us/dapc>.

Sincerely,

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*  
Ohio EPA DAPC, Central District Office

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director





**State of Ohio Environmental Protection Agency  
Division of Air Pollution Control**

**FINAL**

**Air Pollution Permit-to-Install**  
for  
Griffin Wheel Co. - Columbus Plant

Facility ID: 0125100987  
Permit Number: 01-12147  
Permit Type: OAC Chapter 3745-31 Modification  
Issued: 9/8/2008  
Effective: 9/8/2008





State of Ohio Environmental Protection Agency  
 Division of Air Pollution Control

**Air Pollution Permit-to-Install**  
 for  
 Griffin Wheel Co. - Columbus Plant

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State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 01-12147  
**Facility ID:** 0125100987  
**Effective Date:** 9/8/2008

## Authorization

Facility ID: 0125100987  
Facility Description: Steel Foundries  
Application Number(s): A0001078  
Permit Number: 01-12147  
Permit Description: Electric arc furnaces P901 and P902 with area source language from 40CRF63 subpart ZZZZZ and increase in allowable emissions.  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$2,000.00  
Issue Date: 9/8/2008  
Effective Date: 9/8/2008

This document constitutes issuance to:

Griffin Wheel Co. - Columbus Plant  
3900 Bixby Road  
Groveport, OH 43125

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:

Ohio EPA DAPC, Central District Office  
50 West Town Street, 6th Floor  
P.O. Box 1049  
Columbus, OH 43216-1049  
(614)728-3778

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

Chris Korleski  
Director



State of Ohio Environmental Protection Agency  
 Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 01-12147  
**Facility ID:** 0125100987  
**Effective Date:** 9/8/2008

## Authorization (continued)

Permit Number: 01-12147  
 Permit Description: Electric arc furnaces P901 and P902 with area source language from 40CRF63 subpart ZZZZZ and increase in allowable emissions.

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

<b>Emissions Unit ID:</b>	<b>P901</b>
Company Equipment ID:	Electric Arc Furnace #1
Superseded Permit Number:	P0083430
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P902</b>
Company Equipment ID:	Electric Arc Furnace #2
Superseded Permit Number:	P0083430
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 01-12147  
**Facility ID:** 0125100987  
**Effective Date:** 9/8/2008

## **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 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 Ohio EPA DAPC, Central District Office.



(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 Ohio EPA DAPC, Central District Office. 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 Ohio EPA DAPC, Central District Office 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 Ohio EPA DAPC, Central District Office 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 Ohio EPA DAPC, Central District Office 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 Ohio EPA DAPC, Central District Office.
- 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 Ohio EPA DAPC, Central District Office. 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 through completion of the annual PER covering the last period of operation 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 PER 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 PER, 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 Ohio EPA DAPC, Central District Office must be notified in writing of any transfer of this permit.

**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.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** 01-12147  
**Facility ID:** 0125100987  
**Effective Date:** 9/8/2008

## **B. Facility-Wide Terms and Conditions**



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) Emission units P901 and P902 are subject to provisions in 40CFR Part 63, Subpart ZZZZZ, and must provide written notification of area source designation no later than January 2, 2009. The complete MACT requirements, including the MACT General provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate ohio EPA District office or local air agency.
    - (2) The opacity limitation for fugitive emissions established in 40 CFR 63.10895(e), that is, 20 percent opacity as a 6-minute average, except for one 6-minute average that does not exceed 30% opacity in any 1 hour observation period. However, fugitive particulate emissions from the roof monitor above the electric arc furnaces are subject to an opacity limitation established under BAT, which is more stringent than the opacity limitation from 40 CFR 63.10895(e).



State of Ohio Environmental Protection Agency  
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**Final Permit-to-Install**  
**Permit Number:** 01-12147  
**Facility ID:** 0125100987  
**Effective Date:** 9/8/2008

## **C. Emissions Unit Terms and Conditions**



**1. P901, Electric Arc Furnace #1**

**Operations, Property and/or Equipment Description:**

Electric Arc Furnace #1

- 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 operations(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. 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>The combined stack emissions from P901 and P902 shall not exceed 12.7 lbs PM<sub>10</sub>/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 6.8 lbs sulfur dioxide (SO<sub>2</sub>)/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 12.9 lbs NOx/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 101.4 lbs carbon monoxide (CO)/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 11.7 lbs organic compounds (OC)/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 0.027 pound lead (Pb)/hr.</p> <p>See (2)a and (2)b.</p>
b.	OAC rule 3745-17-07(A)(1)	See (2)c.
c.	OAC rule 3745-17-11(B)(1)	See (2)c.
d.	OAC rule 3745-17-08(B)	None, see (2)d.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-07(B)(3)	None, see 1.b)(2)e., below.
f.	OAC rule 3745-31-05(C) (synthetic minor to avoid non-attainment new source review)	<p>The combined stack emissions from P901 and P902 shall not exceed 41.7 tons PM<sub>10</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined fugitive emissions from P901 and P902 shall not exceed 58.0 tons PM<sub>10</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 23.9 tons SO<sub>2</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 45.2 tons NO<sub>x</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 357 tons CO/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 41.1 tons OC/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack emissions from P901 and P902 shall not exceed shall not exceed 0.089 ton Pb/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined fugitive emissions from P901 and P902 shall not exceed 0.124 ton Pb /yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>emissions from P901 and P902 shall not exceed 6.78 ton total metal HAP/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>See b)(2)h. and c)(1), below.</p>
g.	OAC rule 3745-31-10(c)	See Part B.1.
h.	<p>40CFR 63 Subpart ZZZZZ , 63.10881, , 63.10890, , 63.10895(c)(1), , 63.10896, , 63.10898</p> <p>In accordance with 40CFR , 63.10880, the initial applicability of area source to a large foundry shall be based on the facility's melt production for the calendar year 2008.</p>	<p>An existing steel foundry shall not discharge to the atmosphere emissions from any metal melting furnace or group of metal melting furnaces 0.8 pound of particulate emissions (PE) per ton of metal charged or 0.06 pound of total metal HAP per ton of metal charged.</p> <p>An existing steel foundry shall not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent, as a 6-minute average, except for one 6-minute average per hour that does not exceed 30 percent.</p> <p>See b)(2)f. below.</p>

(2) Additional Terms and Conditions

- a. The visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 0 percent opacity, as a 6-minute average, when one or more of the emissions units are in operation.
- b. Visible fugitive particulate emissions from the roof monitor shall not exceed 20 percent opacity, as a 6-minute average, during any one hour observation period.  
  
(OAC rule 3745-31-05(A)(3) )
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- d. This emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to this emissions unit pursuant to OAC rule 3745-17-08(A)(1).

[OAC 3745-17-08(A)(1)]



- e. This emissions unit is exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08.

[OAC 3745-17-07(B)(11)(e)]

- f. The permittee shall comply with the pollution prevention management practices in 40CFR 63 Subpart ZZZZZ, including the following sections

63.10885(a)	keep a copy of the material specifications onsite and available to all personnel with material acquisition duties,
63.10885(a)(1)	use only steel scrap depleted of organics and HAP metals in charge materials
63.10885(b)(1)	scrap specifications for removal of mercury switches
63.10895(c)	discharge to the atmosphere emissions from any metal melting furnace not to exceed, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged
63.10896(a)	prepare and operate according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to an emissions limit in ' 63.10895

c) Operational Restrictions

- (1) The permittee requested a federally enforceable limitation on the annual production rate for purposes of limiting potential to emit to avoid non-attainment new source review. Therefore, the maximum annual production for emissions units P901 and P902, shall not exceed 256,500 tons based upon a rolling, 12-month summation of monthly production.

Emissions units P901 and P902 have been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the monthly steel production rates upon issuance of this permit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).



Whenever the monitored value for the pressure drop deviates from the limit or range specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

Pressure Drop Range is 3 - 10 inches of water.

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the electric arc furnace shop roof monitors serving this emissions unit. The visible emission



checks shall be performed during periods when visible particulate emissions are expected to occur (e.g., during tapping or lancing operations for the electric arc furnace). The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color and location of the emissions;
  - b. the operation(s) occurring during the visible emission observation (e.g., tapping or lancing of the electric arc furnace, etc...).
  - c. whether the emissions are representative of normal operations;
  - d. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - e. the total duration of any visible emission incident; and
  - f. any corrective actions taken to minimize or eliminate the visible emissions.
- (3) If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (e) above or continue the visible emission check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.
- (4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (5) The permittee shall maintain a monthly record of the tons of steel produced in emissions units P901 and P902. Compliance with the annual production restriction shall be based upon a rolling, 12-month summation calculated by summing the monthly record for the current month with the previous 11 months of the monthly records for P901 and P902.
- (40CFR 63 Subpart ZZZZZ ' 63.10899)
- (6) The permittee shall comply with the monitoring, recordkeeping and reporting requirements in 40CFR 63 Subpart ZZZZZ ' 63.10899, including the following sections:



63.10897(a)	conduct inspection for the baghouse
63.10897(d)(1)	as an alternative, install, operate, and maintain a bag leak detection system
63.10899(a)	maintain files including all reports and notifications for at least 5 years
63.10899(b)(1)	maintian records of written material specifications and records that demonstrate compliance for restricted scrap
63.10899(b)(6)	maintain records of the monthly metal melting rate
63.10899(b)(10)	maintain records of capture system inspections and repairs
63.10899(b)(13)	record the results of each inspection and maintenance for particulate emission control device

(7) The permit to install for these emissions units P901 and P902 was evaluated based on the actual materials and the design parameters of the emissions units= exhaust system, as specified by the permittee in the permit application. The  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{R}}$ , ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled  $\Delta$ Review of New Sources of Air Toxic Emissions, Option A $\text{\textcircled{R}}$ , as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions units, (as determined from the raw materials processed) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\text{\textcircled{R}}$ ; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\text{\textcircled{R}}$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.



- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., A24@ hours per day and A7@ days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or Aworst case@ toxic contaminant(s):

Toxic Contaminant: manganese

TLV (mg/m3): 0.2

Maximum Hourly Emission Rate (lbs/hr): 0.58

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.64

MAGLC (ug/m3): 4.78

The permittee, has demonstrated that emissions of manganese from emissions units P901 and P902, was calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the AToxic Air Contaminant Statute@, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (8) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration@, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).



If the permittee determines that the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$  will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$ , ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a  $\Delta$ modification $\text{\textcircled{a}}$  or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$ , ORC 3704.03(F):
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$ , ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$ , ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$ , ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (10) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{a}}$ , ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70



e) Reporting Requirements

- (1) The permittee shall submit notifications and reports to the Ohio EPA Central District Office as required pursuant to 40CFR 63 Subpart ZZZZZ ' 63.10880, per the following sections:

63.10880	notification that identifies the area source as a small foundry or a large foundry
63.10885(a)(1)	written material specifications for metallic scrap
63.10885(a)(1)	summary information on any deviation from the pollution prevention management practices and the operation and maintenance requirements and the corrective action taken.

- (2) The permittee shall submit quarterly reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):
- a. each period of time when the pressure drop across the baghouse was outside of the established range;
  - b. an identification of each incident of deviation described in Aa@ (above) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in Aa@ where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in Aa@ where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

- (3) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the electric arc furnace shop roof monitors serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (4) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack of this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District



Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (5) The permittee shall submit a quarterly deviation (excursion) report that identifies all exceedances of the rolling, 12-month steel production rate.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

- (6) The permittee shall submit annual reports to the appropriate Ohio EPA District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions units or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

f) Testing Requirements

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

- a. Emissions Limitation:

The combined stack emissions from P901 and P902 shall not exceed 12.7 lbs PM<sub>10</sub>/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of a controlled stack emission factor multiplied times the combined maximum hourly production rate: 0.325 lb PM<sub>10</sub>/ton \* 39 tons steel/hr = 12.7 lbs PM<sub>10</sub>/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: Methods 1-4 40 CFR Part 60, Appendix A, and Method 201 40 CFR Part 51, Appendix M for particulate emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- b. Emission Limitations:

The combined stack emissions from P901 and P902 shall not exceed 6.8 lbs SO<sub>2</sub>/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 0.174 lb SO<sub>2</sub>/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 6.8 lbs/hr.



If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 6 for SO<sub>2</sub> emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

c. Emissions Limitation:

The combined stack emissions from P901 and P902 shall not exceed 12.9 lbs NO<sub>x</sub>/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 0.33 lb NO<sub>x</sub>/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 12.9 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 7 for NO<sub>x</sub> emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitations:

The combined stack emissions from P901 and P902 shall not exceed 101.4 lbs CO/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 2.6 lb CO/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 101.4 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 10 for CO emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitations:

The combined stack emissions from P901 and P902 shall not exceed 11.7 lbs OC/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 0.30 lb OC/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 11.7 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix



A, Methods 1-4 and 25a for OC emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

f. Applicable Compliance Method:

The combined stack emissions from P901 and P902 shall not exceed 0.027 pound lead (Pb)/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of a controlled emission factor for EAF steel processing of 0.000693 lbPb/ton steel (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate).  $0.000693 \text{ lb Pb/ton} * 39 \text{ tons/hr} = 0.027 \text{ lb Pb/hr}$

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 29 for Pb emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 45.2 tons NOx/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the monthly production records, in tons of steel, for P901 and P902 shall be multiplied by the emission factor of 0.33 lb NOx/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$42.3 \text{ ton NOx}/0.935 = 45.2 - 42.3 = 2.9 \text{ tons(fugitive)/yr} + 42.3 \text{ tons/yr} = 45.2 \text{ tons NOx/yr.}$$

h. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 357 tons CO/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the



emission factor of 2.6 CO/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$333.4 \text{ tons CO}/0.935 = 356.6 - 333.4 = 23.2 \text{ tons(fugitive)/yr} + 333.4 \text{ tons/yr} = 357 \text{ tons CO/yr.}$$

i. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 41.1 tons OC/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual stack emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor of 0.30 lb OC/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$38.4 \text{ tons OC}/0.935 = 41.1 - 38.4 = 2.7 \text{ tons(fugitive)/yr} + 38.4 \text{ tons/yr} = 41.1 \text{ tons OC tons/yr.}$$

j. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 23.9 tons SO<sub>2</sub>/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor of 0.174 lb SO<sub>2</sub>/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:



$22.3 \text{ tons SO}_2 / 0.935 = 23.9 - 22.3 = 1.6 \text{ tons(fugitive)/yr} + 22.3 \text{ tons/yr} = 23.9 \text{ tons SO}_2/\text{yr}.$

k. Emissions Limitation:

The combined stack emissions from P901 and P902 shall not exceed 41.7 tons PM<sub>10</sub> /yr, based on a rolling, 12-month summation of monthly production rates.;

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902.

$0.325 \text{ lb PM}_{10}/\text{ton} * 256,500 \text{ tons steel/yr} * 1 \text{ ton}/2,000 \text{ lb} = 41.7 \text{ tons PM}_{10}/\text{yr}$

l. Emissions Limitation:

Fugitive PM<sub>10</sub> shall not exceed 58.0 tons/yr, based on a rolling, 12-month summation of monthly emission rates, based on a rolling, 12-month summation of monthly production rates.;

Applicable Compliance Method:

Compliance with the annual emissions limitation may be determined through the use of the controlled annual emission rate in tons from f)(1)k above multiplied by the inverse of the percent control efficiency across the baghouse that is multiplied by the inverse of the percent capture efficiency of the hooding to derive the total uncontrolled fugitive emission rate multiplied by the percent fugitives.

fugitive:  $(41.7 \text{ tons PM}_{10}/(1 - 0.95 \text{ baghouse efficiency}) = 834 \text{ tons} / 0.935 \text{ capture efficiency} = 891.9 \text{ tons PM}_{10} * (0.065) = 58.0 \text{ tons PM}_{10}/\text{yr (fugitive)}$

m. Emission Limitations:

Pb emissions from the electric arc furnace baghouse stack shall not exceed 0.089 ton/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by 0.000693 lb Pb/ton (Columbus plant emission factor).

n. Emission Limitation:

Fugitive Pb emissions shall not exceed 0.124 ton/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:



Compliance with the annual emissions limitation may be determined through the use of the controlled annual emission rate in tons from f)(1)m above multiplied by the inverse of the percent control efficiency across the baghouse that is multiplied by the inverse of the percent capture efficiency of the hooding to derive the total uncontrolled fugitive emission rate multiplied by the percent fugitives.

o. Emission Limitation:

The permittee shall not discharge emissions into the atmosphere from any metal melting furnace or group of all metal melting furnaces that exceed 0.8 pounds of particulate emissions (PE) or 0.06 pounds of total metal HAP per ton of metal charged.

Applicable Compliance Method:

The permittee may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

If the permittee chooses to submit the results of a prior performance test, a written notification must be submitted to the Administrator of the intent to use the previous test data no later than 60 days after the compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(40CFR 63 Subpart ZZZZZ ' 63.10898)

p. Emission Limitation:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 6.78 tons total metal HAP/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in section A.III.5, from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor determined from emission testing in section A.V.p, above, plus a fugitive component for each metal HAP calculated as follows:

The permittee shall collect samples of the baghouse dust during the emission testing and analyze the dust for the percentage of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.



The permittee shall calculate the fugitive emissions component for each metal from the percentages by multiplying the percentages by the calculated hourly fugitive PM<sub>10</sub> component determined from Method 5 testing results. The hourly fugitive PM<sub>10</sub> component would be calculated by the following equation (lbs stack PM<sub>10</sub> / (1 - 0.95 baghouse efficiency) / 0.935 capture efficiency \* (0.065). The hourly rate shall be divided by the tons of metal melted to determine an emission factor for the fugitive component. All supporting test data, analyses and calculations shall be included with the test report.

(2) Emission Limitation:

Fugitive visible particulate emissions from foundry operations shall not exhibit opacity greater than 20 percent (as a 6-minute average), except for one 6-minute average per hour that does not exceed 30 percent during any 60 minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated 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)(3).

For each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions, the permittee shall conduct the test within 180 days of the compliance date and report the results in your notification of compliance status.

(40CFR 63 Subpart ZZZZZ ' 63.10898)

(3) Emission Limitation:

Visible PE from the electric arc furnace baghouse stack shall not exceed 0% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated 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)(3).

g) Miscellaneous Requirements

- (1) The terms and conditions contained in this permit for this emissions unit shall supersede all the air pollution control requirements for the emissions unit contained in the permit to install PTI 01-7737 issued on June 3, 1998.



**2. P902, Electric Arc Furnace #2**

**Operations, Property and/or Equipment Description:**

Electric Arc Furnace #2

- 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 operations(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. 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>The combined stack emissions from P901 and P902 shall not exceed 12.7 lbs PM<sub>10</sub>/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 6.8 lbs sulfur dioxide (SO<sub>2</sub>)/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 12.9 lbs NOx/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 101.4 lbs carbon monoxide (CO)/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 11.7 lbs organic compounds (OC)/hr.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 0.027 pound lead (Pb)/hr.</p> <p>See (2)a.and (2)b. below.</p>
b.	OAC rule 3745-17-07(A)(1)	See (2)c., below.
c.	OAC rule 3745-17-11(B)(1)	See (2)c., below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-08(B)	None, see (2)d., below.
e.	OAC rule 3745-17-07(B)(3)	None, see (2)e., below.
f.	OAC rule 3745-31-05(C) (synthetic minor to avoid non-attainment new source review)	<p>The combined stack emissions from P901 and P902 shall not exceed 41.7tons PM<sub>10</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined fugitive emissions from P901 and P902 shall not exceed 58.0 tons PM<sub>10</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 23.9 tons SO<sub>2</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 45.2 tons NO<sub>x</sub>/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 357 tons CO/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack emissions from P901 and P902 shall not exceed 41.1 tons OC/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined stack emissions from P901 and P902 shall not exceed shall not exceed 0.089 ton Pb/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>The combined fugitive emissions from P901 and P902 shall not exceed 0.124 ton Pb /yr, based on a rolling, 12-month summation of monthly production rates.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>The combined stack and fugitive emissions from P901 and P902 shall not exceed 6.78 ton total metal HAP/yr, based on a rolling, 12-month summation of monthly production rates.</p> <p>See b)(2)h. and.c)(1), below.</p>
g.	OAC rule 3745-31-10(c)	See Part B. 1.
h.	<p>40CFR 63 Subpart ZZZZZ , 63.10881, ' 63.10890, ' 63.10895(c)(1), ' 63.10896, ' 63.10898</p> <p>In accordance with 40CFR ' 63.10880, the initial applicability of area source to a large foundry shall be based on the facility's melt production for the calendar year 2008.</p>	<p>An existing steel foundry shall not discharge to the atmosphere emissions from any metal melting furnace or group of metal melting furnaces 0.8 pound of particulate emissions (PE) per ton of metal charged or 0.06 pound of total metal HAP per ton of metal charged.</p> <p>An existing steel foundry shall not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent, as a 6-minute average, except for one 6-minute average per hour that does not exceed 30 percent.</p> <p>See b)(2)f. below.</p>

(2) Additional Terms and Conditions

- a. The visible particulate emissions from the baghouse stack serving this emissions unit shall not exceed 0 percent opacity, as a 6-minute average, when one or more of the emissions units are in operation.
- b. Visible fugitive particulate emissions from the roof monitor shall not exceed 20 percent opacity, as a 6-minute average, during any one hour observation period.  
 (OAC rule 3745-31-05(A)(3) )
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- d. This emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to this emissions unit pursuant to OAC rule 3745-17-08(A)(1).

[OAC 3745-17-08(A)(1)]



- e. This emissions unit is exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08.

[OAC 3745-17-07(B)(11)(e)]

- f. The permittee shall comply with the pollution prevention management practices in 40CFR 63 Subpart ZZZZZ, including the following sections

63.10885(a)	keep a copy of the material specifications onsite and available to all personnel with material acquisition duties,
63.10885(a)(1)	use only steel scrap depleted of organics and HAP metals in charge materials
63.10885(b)(1)	scrap specifications for removal of mercury switches
63.10895(c)	discharge to the atmosphere emissions from any metal melting furnace not to exceed, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged
63.10896(a)	prepare and operate according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to an emissions limit in ' 63.10895

c) Operational Restrictions

- (1) The permittee requested a federally enforceable limitation on the annual production rate for purposes of limiting potential to emit to avoid non-attainment new source review. Therefore, the maximum annual production for emissions units P901 and P902, shall not exceed 256,500 tons based upon a rolling, 12-month summation of monthly production.

Emissions units P901 and P902 have been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the monthly steel production rates upon issuance of this permit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Whenever the monitored value for the pressure drop deviates from the limit or range specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:



Pressure Drop Range is 3 - 10 inches of water.

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the electric arc furnace shop roof monitors serving this emissions unit. The visible emission checks shall be performed during periods when visible particulate emissions are expected to occur (e.g., during tapping or lancing operations for the electric arc furnace). The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:



- a. the color and location of the emissions;
  - b. the operation(s) occurring during the visible emission observation (e.g., tapping or lancing of the electric arc furnace, etc...).
  - c. whether the emissions are representative of normal operations;
  - d. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - e. the total duration of any visible emission incident; and
  - f. any corrective actions taken to minimize or eliminate the visible emissions.
- (3) If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (e) above or continue the visible emission check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.
- (4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.
- (5) The permittee shall maintain a monthly record of the tons of steel produced in emissions units P901 and P902. Compliance with the annual production restriction shall be based upon a rolling, 12-month summation calculated by summing the monthly record for the current month with the previous 11 months of the monthly records for P901 and P902.
- (40CFR 63 Subpart ZZZZZ ' 63.10899)
- (6) The permittee shall comply with the monitoring, recordkeeping and reporting requirements in 40CFR 63 Subpart ZZZZZ ' 63.10899, including the following sections:

63.10897(a)	conduct inspection for the baghouse
63.10897(d)(1)	as an alternative, install, operate, and maintain a bag leak detection system



63.10899(a)	maintain files including all reports and notifications for at least 5 years
63.10899(b)(1)	maintain records of written material specifications and records that demonstrate compliance for restricted scrap
63.10899(b)(6)	maintain records of the monthly metal melting rate
63.10899(b)(10)	maintain records of capture system inspections and repairs
63.10899(b)(13)	record the results of each inspection and maintenance for particulate emission control device

(7) The permit to install for these emissions units P901 and P902 was evaluated based on the actual materials and the design parameters of the emissions units= exhaust system, as specified by the permittee in the permit application. The  $\Delta$ Toxic Air Contaminant Statute $\text{\textcircled{R}}$ , ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled  $\Delta$ Review of New Sources of Air Toxic Emissions, Option A $\text{\textcircled{R}}$ , as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions units, (as determined from the raw materials processed) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\text{\textcircled{R}}$ ; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists= (ACGIH)  $\Delta$ Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices $\text{\textcircled{R}}$ ; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e.,  $\Delta$ 24 $\text{\textcircled{R}}$  hours per day and  $\Delta$ 7 $\text{\textcircled{R}}$  days per week, from that of 8 hours per day and 5 days per week. The resulting



calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Toxic Contaminant: manganese

TLV (mg/m3): 0.2

Maximum Hourly Emission Rate (lbs/hr): 0.58

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.64

MAGLC (ug/m3): 4.78

The permittee, has demonstrated that emissions of manganese from emissions units P901 and P902, was calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (8) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a modification or if a new toxic is emitted, or the modeled toxic(s) is/are expected to



exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(10) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

(1) The permittee shall submit notifications and reports to the Ohio EPA Central District Office as required pursuant to 40CFR 63 Subpart ZZZZZ ' 63.10880, per the following sections:

63.10880	notification that identifies the area source as a small foundry or a large foundry
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63.10885(a)(1)	written material specifications for metallic scrap
63.10885(a)(1)	summary information on any deviation from the pollution prevention management practices and the operation and maintenance requirements and the corrective action taken.

- (2) The permittee shall submit quarterly reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):
- each period of time when the pressure drop across the baghouse was outside of the established range;
  - an identification of each incident of deviation described in Aa@ (above) where a prompt investigation was not conducted;
  - an identification of each incident of deviation described in Aa@ where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - an identification of each incident of deviation described in Aa@ where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

- (3) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the electric arc furnace shop roof monitors serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (4) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack of this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (5) The permittee shall submit a quarterly deviation (excursion) report that identifies all exceedances of the rolling, 12-month steel production rate.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

- (6) The permittee shall submit annual reports to the appropriate Ohio EPA District Office, documenting any changes made to a parameter or value used in the dispersion model,



that was used to demonstrate compliance with the AToxic Air Contaminant Statute<sup>6</sup>, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions units or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

f) Testing Requirements

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

a. Emissions Limitation:

The combined stack emissions from P901 and P902 shall not exceed 12.7 lbs PM<sub>10</sub>/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of a controlled stack emission factor multiplied times the combined maximum hourly production rate: 0.325 lb PM<sub>10</sub>/ton \* 39 tons steel/hr = 12.7 lbs PM<sub>10</sub>/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: Methods 1-4 40 CFR Part 60, Appendix A, and Method 201 40 CFR Part 51, Appendix M for particulate emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitations:

The combined stack emissions from P901 and P902 shall not exceed 6.8 lbs SO<sub>2</sub>/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 0.174 lb SO<sub>2</sub>/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 6.8 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 6 for SO<sub>2</sub> emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

c. Emissions Limitation:

The combined stack emissions from P901 and P902 shall not exceed 12.9 lbs NO<sub>x</sub>/hr.

Applicable Compliance Method:



Compliance with this emissions limitation may be determined through the use of an emission factor of 0.33 lb NO<sub>x</sub>/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 12.9 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 7 for NO<sub>x</sub> emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitations:

The combined stack emissions from P901 and P902 shall not exceed 101.4 lbs CO/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 2.6 lb CO/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 101.4 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 10 for CO emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitations:

The combined stack emissions from P901 and P902 shall not exceed 11.7 lbs OC/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of an emission factor of 0.30 lb OC/ton (Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate) equal the stack emissions of 11.7 lbs/hr.

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 25a for OC emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

f. Applicable Compliance Method:

The combined stack emissions from P901 and P902 shall not exceed 0.027 pound lead (Pb)/hr.

Applicable Compliance Method:

Compliance with this emissions limitation may be determined through the use of a controlled emission factor for EAF steel processing of 0.000693 lbPb/ton steel



(Columbus plant emission factor) multiplied by 39 tons steel per hour (maximum hourly process rate).  $0.000693 \text{ lb Pb/ton} * 39 \text{ tons/hr} = 0.027 \text{ lb Pb/hr}$

If required, the following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1-4 and 29 for Pb emissions. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 45.2 tons NOx/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the monthly production records, in tons of steel, for P901 and P902 shall be multiplied by the emission factor of 0.33 lb NOx/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$42.3 \text{ ton NOx}/0.935 = 45.2 - 42.3 = 2.9 \text{ tons(fugitive)/yr} + 42.3 \text{ tons/yr} = 45.2 \text{ tons NOx/yr.}$$

h. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 357 tons CO/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor of 2.6 CO/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$333.4 \text{ tons CO}/0.935 = 356.6 - 333.4 = 23.2 \text{ tons(fugitive)/yr} + 333.4 \text{ tons/yr} = 357 \text{ tons CO/yr.}$$



i. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 41.1 tons OC/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual stack emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor of 0.30 lb OC/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$38.4 \text{ tons OC} / 0.935 = 41.1 - 38.4 = 2.7 \text{ tons(fugitive)/yr} + 38.4 \text{ tons/yr} = 41.1 \text{ tons OC tons/yr.}$$

j. Emission Limitations:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 23.9 tons SO<sub>2</sub>/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor of 0.174 lb SO<sub>2</sub>/ton (Columbus plant emission factor) and divided by 2,000 lbs/ton to yield the stack emission rate. The stack emission rate, in tons, may be divided by the hooding capture efficiency (0.935) to yield the total emission rate, in tons, from which the stack emission rate is subtracted to yield the fugitive emission rate in tons that is added back to the stack emission rate to yield the total emission rate in tons. The total potential emissions may be calculated as follows:

$$22.3 \text{ tons SO}_2 / 0.935 = 23.9 - 22.3 = 1.6 \text{ tons(fugitive)/yr} + 22.3 \text{ tons/yr} = 23.9 \text{ tons SO}_2/\text{yr.}$$

k. Emissions Limitation:

The combined stack emissions from P901 and P902 shall not exceed 41.7 tons PM<sub>10</sub> /yr, based on a rolling, 12-month summation of monthly production rates.;



Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902.

$$0.325 \text{ lb PM}_{10}/\text{ton} * 256,500 \text{ tons steel/yr} * 1 \text{ ton}/2,000 \text{ lb} = 41.7 \text{ tons PM}_{10}/\text{yr}$$

I. Emissions Limitation:

Fugitive PM<sub>10</sub> shall not exceed 58.0 tons/yr, based on a rolling, 12-month summation of monthly emission rates, based on a rolling, 12-month summation of monthly production rates.;

Applicable Compliance Method:

Compliance with the annual emissions limitation may be determined through the use of the controlled annual emission rate in tons from f)(1)k above multiplied by the inverse of the percent control efficiency across the baghouse that is multiplied by the inverse of the percent capture efficiency of the hooding to derive the total uncontrolled fugitive emission rate multiplied by the percent fugitives.

$$\text{fugitive: } (41.7 \text{ tons PM}_{10}/(1 - 0.95 \text{ baghouse efficiency}) = 834 \text{ tons} /0.935 \text{ capture efficiency} = 891.9 \text{ tons PM}_{10} * (0.065) = 58.0 \text{ tons PM}_{10}/\text{yr (fugitive)}$$

m. Emission Limitations:

Pb emissions from the electric arc furnace baghouse stack shall not exceed 0.089 ton/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by 0.000693 lb Pb/ton (Columbus plant emission factor).

n. Emission Limitation:

Fugitive Pb emissions shall not exceed 0.124 ton/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation may be determined through the use of the controlled annual emission rate in tons from f)(1)m above multiplied by the inverse of the percent control efficiency across the baghouse that is



multiplied by the inverse of the percent capture efficiency of the hooding to derive the total uncontrolled fugitive emission rate multiplied by the percent fugitives.

o. Emission Limitation:

The permittee shall not discharge emissions into the atmosphere from any metal melting furnace or group of all metal melting furnaces that exceed 0.8 pounds of particulate emissions (PE) or 0.06 pounds of total metal HAP per ton of metal charged.

Applicable Compliance Method:

The permittee may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

If the permittee chooses to submit the results of a prior performance test, a written notification must be submitted to the Administrator of the intent to use the previous test data no later than 60 days after the compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(40CFR 63 Subpart ZZZZZ ' 63.10898)

p. Emission Limitation:

The combined stack and fugitive emissions from P901 and P902 shall not exceed 6.78 tons total metal HAP/yr, based on a rolling, 12-month summation of monthly production rates.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be based on record keeping in d)(5), from which the rolling, 12-month summation of the cumulative monthly production records for P901 and P902 shall be multiplied by the emission factor determined from emission testing in section A.V.p, above, plus a fugitive component for each metal HAP calculated as follows:

The permittee shall collect samples of the baghouse dust during the emission testing and analyze the dust for the percentage of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.



The permittee shall calculate the fugitive emissions component for each metal from the percentages by multiplying the percentages by the calculated hourly fugitive PM<sub>10</sub> component determined from Method 5 testing results. The hourly fugitive PM<sub>10</sub> component would be calculated by the following equation (lbs stack PM<sub>10</sub> / (1 - 0.95 baghouse efficiency) / 0.935 capture efficiency \* (0.065). The hourly rate shall be divided by the tons of metal melted to determine an emission factor for the fugitive component. All supporting test data, analyses and calculations shall be included with the test report.

(2) Emission Limitation:

Fugitive visible particulate emissions from foundry operations shall not exhibit opacity greater than 20 percent (as a 6-minute average), except for one 6-minute average per hour that does not exceed 30 percent during any 60 minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated 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)(3).

For each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions, the permittee shall conduct the test within 180 days of the compliance date and report the results in your notification of compliance status.

(40CFR 63 Subpart ZZZZZ ' 63.10898)

(3) Emission Limitation:

Visible PE from the electric arc furnace baghouse stack shall not exceed 0% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated 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)(3).

g) Miscellaneous Requirements

- (1) The terms and conditions contained in this permit for this emissions unit shall supersede all the air pollution control requirements for the emissions unit contained in the permit to install PTI 01-7737 issued on June 3, 1998.