

Synthetic Minor Determination and/or Netting Determination

Permit To Install 05-11062

A. Source Description

Quincy Castings, Inc. (Quincy) is a small, gray iron foundry. Quincy produces gray iron and ductile iron. The production process includes metal furnace charging, metal melting, magnesium treatment to produce ductile iron, pouring, shakeout, knock off, grinding, finishing, sand handling operations, and core/mold preparation.

Quincy has applied for a permit to install a new coreless, electric induction melt furnace with a 2.7 ton melt capacity. The new electric furnace allows for the shutdown of a coke cupola, provides a backup for the existing electric induction furnace, and allows the facility to operate during non-peak hours for electricity demand.

B. Facility Emissions and Attainment Status

Quincy is located at 206 Liberty Street, Quincy, Logan County. Logan County is classified as attainment for PM₁₀.

Based upon a maximum operating schedule of 8,760 hours, Quincy is major source of PM₁₀ emissions. With the new electric induction furnace Quincy has a melt capacity of 39,110 tons per year. Quincy, however, has several processes that act as bottlenecks to prevent the facility from achieving the maximum melt capacity. For this reason, Quincy has requested a melt limit of 14,000 tons of metal per year. As a result, the potential PM₁₀ emissions from the facility will not exceed 80 tons per year.

C. Source Emissions

The new electric induction furnace, emissions unit F006, has a potential melt capacity of 22,680 tons per year and magnesium treatment capacity of 10,206 tons. The potential PM₁₀ emissions from the melt furnace and the magnesium treatment are 14.3 tons. Quincy requested a limitation of 14,000 tons for the entire facility, and federally enforceable emission limitations for PM₁₀ emissions from melting and magnesium treatment of 7.28 tons.

To ensure compliance with the rolling, 12-month PM₁₀ emission limitation of 7.28 tons, this permit contains a rolling, 12-month limitations for melting metal of 14,000 tons and a rolling, 12-month limitation for molten metal magnesium treatment of 6,300 tons. Quincy is required to maintain monthly records of the amount of metal melted and the amount of molten metal which received magnesium treatment. In addition, Quincy is required to maintain a rolling, 12-month summation of the following: a calculation of PM₁₀ emissions, in tons; the amount of metal melted, in tons; and the amount of molten metal that received magnesium treatment, in tons.

D. Conclusion

The Synthetic Minor permit will effectively limit the potential PM₁₀ emissions from the melt furnaces and the magnesium treatment at Quincy. As a result, Quincy's potential PM₁₀ emissions will be less than 80 tons per year.

A combination of production limitations, monthly record keeping, rolling, 12-month record keeping, and quarterly deviation reporting requirements shall ensure that compliance with the emissions limitation is maintained.

State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

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

**RE: DRAFT PERMIT TO INSTALL
LOGAN COUNTY
Application No: 05-11062**

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 1/15/2004

Quincy Castings Inc
Gary Bardon
P.O. Box 129 206 Liberty St
Quincy, OH 43343

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1600** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Michael W. Ahern

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

CC: USEPA

SWDO

IN

LOGAN COUNTY

**PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL 05-11062 FOR AN AIR CONTAMINANT SOURCE FOR
QUINCY CASTINGS INC**

On 1/15/2004 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Quincy Castings Inc**, located at **206 Liberty St, Quincy, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 05-11062:

Coreless electric induction melting furnace - 6 tons.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Phil Hinrichs, Ohio EPA, Southwest District Office, 401 East Fifth Street, Dayton, OH 45402-2911 [(937)285-6357]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 05-11062

Application Number: 05-11062

APS Premise Number: 0546000001

Permit Fee: **To be entered upon final issuance**

Name of Facility: Quincy Castings Inc

Person to Contact: Gary Bardon

Address: P.O. Box 129 206 Liberty St
Quincy, OH 43343

Location of proposed air contaminant source(s) [emissions unit(s)]:

**206 Liberty St
Quincy, Ohio**

Description of proposed emissions unit(s):

Coreless electric induction melting furnace - 6 tons.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the

previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or

condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

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

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

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

9. Compliance Requirements

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

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or

modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

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

12. Air Pollution Nuisance

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

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

5. Construction of New Sources(s)

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

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

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

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

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

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	7.56
PM₁₀	7.28
Lead	0.7

Quincy Castings Inc

PTI Application: 05-11062

Issued: To be entered upon final issuance

Facility ID: 0546000001

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F006 - 6-ton, coreless, electric induction melting furnace including the pour-over magnesium treatment	OAC rule 3745-31-05(A)(3)	<p>Particulate emissions (PE) shall not exceed 3.9 pounds per hour (see Section A.2.a.).</p> <p>Particulate matter with an aerodynamic diameter equal or less than 10 microns (PM₁₀) shall not exceed 3.78 pounds per hour (see Section A.2.a.).</p> <p>Lead emissions shall not exceed 0.3 pound per hour (see Section A.2.a.).</p> <p>PE shall not exceed 7.56 tons as a rolling, 12-month summation for emissions unit F002 and F006, combined (see Section F.)</p> <p>Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.</p> <p>Compliance with this rule shall also include compliance with OAC rules 3745-17-11(B) and 3745-35-07(B).</p> <p>None (See Section A.2.b.)</p> <p>The emission limitation specified by this rule is less stringent than the emission</p>
	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	
	OAC rule 3745-17-11(B)(2)	

OAC rule 3745-35-07(B)

limitation established pursuant to OAC rule 3745-31-05(A)(3).

PM₁₀ emissions shall not exceed 7.28 tons as a rolling, 12-month summation for emissions units F002 and F006, combined (see Section F.)

Lead emissions shall not exceed 0.7 tons as a rolling, 12-month summation for emissions unit F002 and F006 combined.

2. Additional Terms and Conditions

2.a The 3.9 lbs PE/hr, the 3.78 lbs PM₁₀/hr and the 0.3 lb Lead/hr limitations are based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.

2.b This emissions unit is not located in an "Appendix A" area as indicated in OAC rule 3745-17-08. Therefore, the emissions unit is not subject to the RACM requirements established in OAC rule 3745-17-08(B) and the visible emission limitations specified in OAC rule 3745-17-07(B).

B. Operational Restrictions

1. The maximum amount of metal melted for emissions units F002 and F006, combined, shall not exceed 14,000 tons, based upon a rolling, 12-month summation.

The permittee has sufficient existing records to demonstrate compliance with this limit during the first twelve months after issuance of this permit.

2. The maximum amount of metal that receives magnesium treatment for emissions unit F002 and F006, combined, shall not exceed 6,300 tons, based upon a rolling, 12-month summation.

The permittee has sufficient existing records to demonstrate compliance with this limit during the first twelve months after issuance of this permit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain the following monthly records for emissions unit F002 and F006, combined:

a. the amount of metal melted, in tons;

b. the rolling, 12-month summation of metal melted, in tons;

- c. the particulate emissions from melting metal, i.e., multiply the amount of metal melted (1.a.) by the emission factor 0.9 lb PE/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.);
- d. the PM_{10} emission from melting metal, i.e., multiply the amount of metal melted (1.a.) by the emission factor 0.86 lb PM_{10} /ton (9/85. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fourth Edition with supplements A, B, and C, AP-42.);
- e. the amount of metal that received magnesium treatment, in tons;
- f. the rolling, 12-month summation of metal that received magnesium treatment, in tons;
- g. the particulate emissions from the magnesium treatment, i.e., multiply the amount of metal that received magnesium treatment (1.e.) by the emission factor 0.4 lbs PE/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.);

The PE from magnesium treatment is assumed to be equal to or less than 10 micrometers in diameter. Therefore, the PM_{10} emissions are assumed to be equal to the PE.

- h. the lead emissions from melting metal, i.e., multiply the amount of metal melted (1.a.) by the emission factor 0.1 lb PE/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.);
 - i. the total PE, in pounds or tons, i.e., the summation of (1.c.) and (1.g.);
 - j. the total rolling, 12-month PE, in tons, i.e., the summation of PE for the previous 12 months;
 - k. the total PM_{10} emissions, in pounds or tons, i.e., the summation (1.d.) and (1.g.);
 - l. the total rolling, 12-month PM_{10} emissions, in tons, i.e., the summation of PM_{10} emissions for the previous 12 months; and
 - m. the total rolling, 12-month lead emissions, in tons, i.e., the summation of lead emission for the previous 12 months.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive 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 location and color of the emissions;

- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

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 (d) above or continue the daily 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.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the rolling, 12-month limitation for metal melted of 14,000 tons;
 - b. the rolling, 12-month limitation for metal that receives magnesium treatment of 6,300 tons;
 - c. the rolling, 12-month PE limitation of 7.56 tons;
 - d. the rolling, 12-month PM₁₀ emission limitation of 7.28 tons; and
 - e. the rolling, 12-month lead emission limitation of 0.7 tons.

These reports are due by the date described in Part I - General Terms and Conditions A.2. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

1. Emission Limitation:
3.9 pounds particulate emissions (PE) per hour

Applicable Compliance Method:

Compliance with the hourly PE limitation shall be determined as follows:

$$E1 = (Pm \times M) + (Pt \times Et)$$

where,

E1 = the hourly PE rate, in pounds

Pm = the maximum amount of metal melted per hour, 3.0 tons

M = the PE factor for melting metal, 0.9 lb/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.).

Pt = the maximum amount of metal that can receive magnesium treatment per hour, 3.0 tons

Et = the PE factor for magnesium treatment, 0.4 lb/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.)

2. Emission Limitation:
3.78 pounds PM₁₀ per hour

Applicable Compliance Method:

Compliance with the hourly PM₁₀ limitation shall be determined as follows:

$$E2 = (Pm \times T) + (Pt \times Et)$$

where,

E2 = the hourly PM₁₀ emission rate, in pounds

Pm = the maximum amount of metal melted per hour, 3.0 tons

T = the PM₁₀ emission factor for melting metal, 0.86 lb/ton (9/85. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fourth Edition with supplements A, B, and C, AP-42.).

Pt = the maximum amount of metal that can receive magnesium treatment per hour, 3.0 tons

Et = the PM₁₀ emission factor for magnesium treatment, 0.4 lb/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.)

3. Emission Limitation:
0.3 pound lead emissions per hour

Applicable Compliance Method:

Compliance with the hourly lead emission limitation shall be determined as follows:

$$E_{pb} = (P_m \times P_b)$$

where,

E_{pb} = the hourly lead emission rate, in pounds

P_m = the maximum amount of metal melted per hour, 3.0 tons

M = the lead emission factor for melting metal, 0.1 lb/ton (1/1995. Section 12.10, Gray Iron Foundries. Compilation of Air Pollutant Emission Factors, Volume I: *Stationary Point and Area Sources*, Fifth Edition, AP-42.).

4. Emission Limitation -
7.56 tons PE per rolling, 12-month summation for emissions unit F002 and F006, combined

7.28 tons PM_{10} emissions as a rolling, 12-month summation for emissions units F002 and F006, combined

0.7 ton lead emissions as a rolling, 12-month summation for emissions unit F002 and F006, combined

Applicable Compliance Method -

Compliance with the rolling, 12-month emission limitations shall be determined by the record keeping in Part III - A.III.1. of this permit.

5. Emission Limitation -
Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average

Applicable Compliance Method -

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3).

F. Miscellaneous Requirements

The installation of emissions unit F006 is not intended to increase production. Rather, the purpose of the new furnace is to backup the existing electric induction melting furnace (emissions unit F002), eliminate the use of the Cupola furnace, and allow the facility to operate during non-peak hours for electricity demand. As a result, the installation of emissions unit F006 will not cause a substantial increase in facility-wide emissions. In addition, the permittee has requested synthetic minor limitations for PM_{10} emissions. For the aforementioned reasons, the annual PE, PM_{10} and lead emission limitations are combined for the new and the old electric induction furnaces, and include the emissions from the pour-over magnesium treatment.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F006 - 6-ton, coreless, electric induction melting furnace including magnesium treatment		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None