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
DEFIANCE COUNTY
Application No: 03-16280
Fac ID: 0320010001

CERTIFIED MAIL

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

DATE: 4/5/2005

GM Powertrain Group, Defiance Plant
Lisa Horan
26437 St Rte 281 E
Defiance, OH 43512-0070

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 of 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 **$8600** 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.

Sincerely,

Michael W. Ahern

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

CC: **USEPA** **NWDO** **IN** **MI**

DEFIANCE COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL **03-16280** FOR AN AIR CONTAMINANT SOURCE FOR
GM Powertrain Group, Defiance Plant

On 4/5/2005 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **GM Powertrain Group, Defiance Plant**, located at **26427 St Rte 281 E, Defiance**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 03-16280:

15-ton medium frequency induction furnaces.

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.

Don Waltermeyer, Ohio EPA, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402 [(419)352-8461]

DRAFT PERMIT TO INSTALL 03-16280

Application Number:	03-16280
Facility ID:	0320010001
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	GM Powertrain Group, Defiance Plant
Person to Contact:	Lisa Horan
Address:	26437 St Rte 281 E Defiance, OH 43512-0070

Location of proposed air contaminant source(s) [emissions unit(s)]:
26427 St Rte 281 E
Defiance, Ohio

Description of proposed emissions unit(s):
15-ton medium frequency induction furnaces.

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 <u>emission limitations</u>, <u>operational restrictions</u>, <u>and control device operating parameter limitations</u>, 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 application must be made to the Director for the installation or modification of any other emissions unit(s).

8. Construction Compliance Certification

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

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

Pollutant	Tons Per Year
PE	25.13
OC	51.85
SO2	6.82
CO	1.98
NOx	39.5
Pb	0.3

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

1. The following emissions units in this permit are subject to 40 CFR, Part 63, Subpart EEEEE--National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries (see attached):

   P902 - malleable iron line 1 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)
   P903 - malleable iron line 2 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)
   P904 - malleable iron line 3 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)

   All of the requirements of Subpart EEEEE are specified in Attachment A. Ordinarily, these requirements would be incorporated into Part II of this permit; however, incorporating Subpart EEEEE (which is only available in PDF format) into Part II of this permit was not possible. Numerous difficulties were encountered in attempting to copy and paste from a PDF format into WordPerfect format.

2. The permittee shall submit a testing protocol that demonstrates the quantification of particulate matter less than 10 microns in size (PM10) contained in the allowable particulate emissions in this permit. Emission testing for PM10 shall be performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office. The testing protocol should be submitted within a time frame that will allow for review and approval by Ohio EPA such that required testing is conducted no later than 180 calendar days after startup.

   The test(s) shall be conducted while the emissions unit(s) is operating at its maximum capacity unless otherwise specified or approved by the appropriate Ohio EPA District or local air agency.

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

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

   A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northwest District Office within 30 days following completion of the test(s). The permittee may request additional

time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northwest District Office.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
F006 - malleable iron raw material conveyors (includes 4 raw material, 1 transfer, and 1 mobile conveyor)	OAC rule 3745-31-05(A)(3)	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See A.I.2.b) 0.59 pounds (lbs)/hour (hr) fugitive particulate emissions (PE), 2.58 tons per year (tpy) fugitive PE 0.23 lbs fugitive particulate matter less than 10 microns (PM10)/hr, 1.00 tpy PM10
	OAC rule 3745-17-07(B)(1)	See A.I.2.a
	OAC rule 3745-17-08(B)	Visible fugitive PE shall not exceed 20% opacity as a three-minute average. (See A.I.2.c) Less stringent than, or equal in stringency to, the above-mentioned control measure requirements.

2. Additional Terms and Conditions

2.a The material handling operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:

i. four (4) raw material conveyors, one (1) transfer conveyor, and one (1) mobile conveyor.

2.b The permittee shall employ best available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

i. Total building enclosure for the malleable iron raw material handling operations.

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

2.c The visible fugitive PE limitation shall apply to the following:

i. The egress points (i.e., building windows, doors, roof monitors, etc.) serving the malleable iron operations; and

ii. visible PE due solely to the operations of the malleable iron operations.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible 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.

2. The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the above-mentioned applicable requirements. Such modified visible emissions check frequencies would not be considered a minor or significant modification that would be subject to the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.

IV. Reporting Requirements

1. 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1. of the Terms and Conditions of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation: 0.59 lb fugitive PE/hr, 2.58 tpy fugitive PE

      Applicable Compliance Methods: The hourly emission limitation was developed by multiplying the maximum hourly process rate of 65 tons/hr by the emission factor 0.0030 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 08/95) and multiplying by 3 (the number of transfer points).

      The tpy limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and tons/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

   b. Emission Limitation: 0.23 lbs fugitive PM10/hr, 1.00 tpy PM10

      Applicable Compliance Methods: The hourly emission limitation was developed by multiplying the maximum hourly process rate of 65 tons/hr by the emission factor 0.0012 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 08/95) and multiplying by 3 (the number of transfer points).

      The tpy limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and tons/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

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

Applicable Compliance Method: If required, compliance with the visible emission limitation shall be determined through visible emissions observations performed in accordance with 40 CFR, Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03 (B)(3).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
F006 - malleable iron raw material conveyors (includes 4 raw material, 1 transfer, and 1 mobile conveyor)	OAC rule 3745-31-05	LIMIT(s)

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P455 - 80 ton electric induction holding furnace (malleable iron vertical channel holding furnace)and malleable iron common fixed launder	OAC rule 3745-31-05(A)(3)	See A.I.2.a. 0.06 pounds (lbs) particulate emissions (PE)/hour (hr), 0.26 tons/year (tpy) PE (See A.I.2.b) Visible particulate emissions shall not exceed 10% opacity as a six-minute average from the stack(s) servicing this emissions unit (Launder Stack)
	OAC rule 3745-17-07(A)	See A.I.2.c.
	OAC rule 3745-17-11(B)	See A.I.2.c.

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse (Holding Furnace Baghouse) with an overall control efficiency of 97.5% for PE.

2.b All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

2.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).

II. Operational Restrictions

1. The pressure drop across the baghouse (Holding furnace baghouse) shall be maintained within the range of 1-8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across each baghouse cell while the emission unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

V. Testing Requirements

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

   a. Emission Limitation: 0.06 lbs PE/hr, 0.26 tpy PE

      Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 65 tons of metal per hour by the emission factor of 0.0197 lb PE/ton metal produced (company supplied emission factor from emissions testing on holding furnace 3 ML-EF13, 12/09/98), by 2 (to account for emissions from the furnace and launder) and applying the 97.5% control efficiency, for use of a baghouse. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

      The tpy limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and tons/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

   b. Emission Limitation: Visible PE shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emissions unit (Launder stack)

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P455 - 80 ton induction furnace (malleable iron vertical channel holding furnace)and malleable iron common fixed launder	OAC rule 3745-31-05	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P456 - malleable iron cold box core machine 1	OAC rule 3745-31-05(C)	28.99 tons of organic compounds (OC) per rolling 12-month period, from all the emissions identified in A.I.2.b. (See A.I.2.c) 5.63 tons of particulate emissions (PE) per rolling 12-month period, from all the emissions unit identified in A.I.2.b. (See A.I.2.d)
	OAC rule 3745-31-05(A)	See A.I.2.a 0.71 lbs PE/hour (hr), 3.11 tons PE/yr (See A.I.2.d) 0.3 lb SO2/hr, 1.31 tons SO2/yr 7.30 tons OC/yr Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average.
	OAC rule 3745-17-07(A)	See A.I.2.e
	OAC rule 3745-17-11(B)	See A.I.2.e
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day
	OAC rule 3745-18-06(E)	See A.I.2.e

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements have been determined to be the use of a catalyst gas scrubber designed for the control of catalyst gas on cold box core machines.

2.b The emissions of OC and PE from emissions units P456, P457, P458, P459 & P460 combined shall not exceed the following based on a sand processing restriction (See A.II.1):

i. 28.99 tons OC per rolling 12-month period

ii. 5.63 tons PE per rolling 12-month period

The OC and PE rolling 12-month limitations are federally enforceable limitations established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicability.

2.c For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.d All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

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

II. Operational Restrictions

1. The annual sand processed for emissions units P456, P457, P458, P459 & P460, combined, shall not exceed 87,600 tons, based upon a rolling, 12-month summation of sand throughput.

To ensure federal enforceability during the first 12 calendar months of operation, the permittee shall not exceed the sand throughput levels specified in the following table:

Month(s)	Maximum Cumulative Sand processed (tons)
1	7300
1-2	14,600
1-3	21,900
1-4	29,200
1-5	36,500
1-6	43,800

1-7	51,100
1-8	58,400
1-9	65,700
1-10	73,000
1-11	80,300
1-12	87,600

After the first 12 calendar months of operation, compliance with the annual sand restriction shall be based upon a rolling 12-month summation of monthly sand processed.

2. The pH and liquor flow rate of the catalyst gas scrubbers shall be maintained at the following levels:

   a. the catalyst gas scrubber liquor pH shall be continuously maintained between 9 and 13 while this emissions unit is in operation; and

   b. the catalyst gas scrubber liquor flow rate shall be continuously maintained at a value of not less than 25 gallons per minute at all times while this emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall collect and record the following each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the total sand processed, in tons;

   b. for the first 12 months of operation, the cumulative sand processed, in tons; and

   c. after the first 12 months operation, the sand processed, in tons, based on a rolling, 12-month summation of the sand processed.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the quantity of sand processed in the malleable iron cold box core machines, in tons;

   b. the calculated emission rate for OC, in tons (2.a x 0.000331 ton OC/ton sand processed);

   c. the calculated emission rate for PE, in tons, (2.a x 0.0000643 ton PE/ton sand processed);

   d. the annual OC emission rate, in tons, based upon the rolling, 12-month summation of monthly emission rates; and

e. the annual PE emission rate, in tons, based upon the rolling 12-month summation of monthly emission rates.

3. The permittee shall calculate and record the following information each day for this emissions unit:

   a. the name and identification of each core produced in this emissions unit;

   b. the amount of sand processed in this emissions unit; and

   c. the total OC emissions [3.b x 0.009 lbs OC/lbs sand processed], in pounds.

4. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

5. The permittee shall collect and record the following information each day:

   a. the pH of the catalyst gas scrubber, once per shift each day;

   b. the catalyst gas scrubber liquor flow rate, in gallons per minute, on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports, which identify all exceedances of the following:

   a. for the first 12 calendar months of operation, the maximum allowable cumulative sand throughput restriction;

   b. after the first 12 calendar months of operation, the rolling, 12-month sand throughput restriction;

   c. the rolling, 12-month emission limitations for PE & OC;

   d. all exceedances of the daily OC emission limitation of 40.0 pounds; and

   e. all periods of time during which the scrubber liquor pH and flow rate did not comply with the requirements specified above.

   These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations/usage restrictions of this permit shall be determined in accordance with the following compliance methods:

   a. Emission Limitation: 87,600 tons of sand per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.1.

   b. Emission Limitation: 28.99 tons of OC per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   c. Emission Limitation: 5.63 tons of PE per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   d. Emission Limitation: 8 lbs OC/hr

      Compliance Method: The hourly OC emission limitation exceeds the emissions unit's potential to emit*. Therefore, no hourly record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

      * The potential to emit is based on a company-supplied emission factor of 0.0009 lbs of OC/lb-sand and a maximum production rate of 4000 lbs-sand/hr.

      If required, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with Methods 18, 25, or 25A of 40 CFR, Part 60, Appendix A.

   e. Emission Limitation: 40.0 lbs of OC/day

      Applicable Compliance Method
      Compliance with the daily emission limitation shall be based upon record keeping requirements specified in Section A.III.3.

   f. Emission Limitation: 0.71 lbs PE/hr, 3.11 tons PE/year

      Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.000178 lbs PE/lb sand and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines). If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-5.

      The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

g. Emission Limitation: 0.3 lb SO2/hr, 1.31 tons/yr SO2

Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.0025 lbs SO2/lb sand, applying a 97% overall control efficiency and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines).

The ton/yr limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 & 6.

h. Emission Limitation: 7.3 tons OC/yr

Compliance Method: The emission limitation was developed by multiplying the daily emission limitation of 40 lbs by a maximum operating schedule of 365 days and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation compliance will also be shown with the annual limitation.

i. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average

Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P456- malleable iron cold box core machine 1	OAC rule 3745-31-05	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P456) was evaluated based on the actual materials (resin materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

   a. Pollutant: cumene
   TLV (mg/m3): 246
   Maximum Hourly Emission Rate (lbs/hr): 0.48
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 22.8
   MAGLC (ug/m3): 5857

   b. Pollutant: acrylic acid
   TLV (mg/m3): 5.89
   Maximum Hourly Emission Rate (lbs/hr): 0.048
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3
   MAGLC (ug/m3): 140.24

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

   a. changes in the composition of the materials used (resin materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

   b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P457 - malleable iron cold box core machine 2	OAC rule 3745-31-05(C)	28.99 tons of organic compounds (OC) per rolling 12-month period, from all the emissions identified in A.I.2.b. (See A.I.2.c) 5.63 tons of particulate emissions (PE) per rolling 12-month period, from all the emissions unit identified in A.I.2.b. (See A.I.2.d)
	OAC rule 3745-31-05(A)	See A.I.2.a 0.71 lbs PE/hour (hr), 3.11 tons PE/yr (See A.I.2.d) 0.3 lb SO2/hr, 1.31 tons SO2/yr 7.30 tons OC/yr Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average.
	OAC rule 3745-17-07(A)	See A.I.2.e
	OAC rule 3745-17-11(B)	See A.I.2.e
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day
	OAC rule 3745-18-06(E)	See A.I.2.e

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements have been determined to be the use of a catalyst gas scrubber designed for the control of catalyst gas on cold box core machines.

2.b The emissions of OC and PE from emissions units P456, P457, P458, P459 & P460 combined shall not exceed the following based on a sand processing restriction (See A.II.1):

i. 28.99 tons OC per rolling 12-month period

ii. 5.63 tons PE per rolling 12-month period

The OC and PE rolling 12-month limitations are federally enforceable limitations established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicability.

2.c For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.d All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

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

II. Operational Restrictions

1. The annual sand processed for emissions units P456, P457, P458, P459 & P460, combined, shall not exceed 87,600 tons, based upon a rolling, 12-month summation of sand throughput.

To ensure federal enforceability during the first 12 calendar months of operation, the permittee shall not exceed the sand throughput levels specified in the following table:

Month(s)	Maximum Cumulative Sand processed (tons)
1	7300
1-2	14,600
1-3	21,900
1-4	29,200
1-5	36,500
1-6	43,800

1-7	51,100
1-8	58,400
1-9	65,700
1-10	73,000
1-11	80,300
1-12	87,600

After the first 12 calendar months of operation, compliance with the annual sand restriction shall be based upon a rolling 12-month summation of monthly sand processed.

2. The pH and liquor flow rate of the catalyst gas scrubbers shall be maintained at the following levels:

   a. the catalyst gas scrubber liquor pH shall be continuously maintained between 9 and 13 while this emissions unit is in operation; and

   b. the catalyst gas scrubber liquor flow rate shall be continuously maintained at a value of not less than 25 gallons per minute at all times while this emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall collect and record the following each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the total sand processed, in tons;

   b. for the first 12 months of operation, the cumulative sand processed, in tons; and

   c. after the first 12 months operation, the sand processed, in tons, based on a rolling, 12-month summation of the sand processed.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the quantity of sand processed in the malleable iron cold box core machines, in tons;

   b. the calculated emission rate for OC, in tons (2.a x 0.000331 ton OC/ton sand processed);

   c. the calculated emission rate for PE, in tons, (2.a x 0.0000643 ton PE/ton sand processed);

   d. the annual OC emission rate, in tons, based upon the rolling, 12-month summation of monthly emission rates; and

e. the annual PE emission rate, in tons, based upon the rolling 12-month summation of monthly emission rates.

3. The permittee shall calculate and record the following information each day for this emissions unit:

   a. the name and identification of each core produced in this emissions unit;

   b. the amount of sand processed in this emissions unit; and

   c. the total OC emissions [3.b x 0.009 lbs OC/lbs sand processed], in pounds.

4. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

5. The permittee shall collect and record the following information each day:

   a. the pH of the catalyst gas scrubber, once per shift each day;

   b. the catalyst gas scrubber liquor flow rate, in gallons per minute, on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports, which identify all exceedances of the following:

   a. for the first 12 calendar months of operation, the maximum allowable cumulative sand throughput restriction;

   b. after the first 12 calendar months of operation, the rolling, 12-month sand throughput restriction;

   c. the rolling, 12-month emission limitations for PE & OC;

   d. all exceedances of the daily OC emission limitation of 40.0 pounds; and

   e. all periods of time during which the scrubber liquor pH and flow rate did not comply with the requirements specified above.

   These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations/usage restrictions of this permit shall be determined in accordance with the following compliance methods:

   a. Emission Limitation: 87,600 tons of sand per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.1.

   b. Emission Limitation: 28.99 tons of OC per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   c. Emission Limitation: 5.63 tons of PE per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   d. Emission Limitation: 8 lbs OC/hr

      Compliance Method: The hourly OC emission limitation exceeds the emissions unit's potential to emit*. Therefore, no hourly record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

      * The potential to emit is based on a company-supplied emission factor of 0.0009 lbs of OC/lb-sand and a maximum production rate of 4000 lbs-sand/hr.

      If required, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with Methods 18, 25, or 25A of 40 CFR, Part 60, Appendix A.

   e. Emission Limitation: 40.0 lbs of OC/day

      Applicable Compliance Method
      Compliance with the daily emission limitation shall be based upon record keeping requirements specified in Section A.III.3.

   f. Emission Limitation: 0.71 lbs PE/hr, 3.11 tons PE/year

      Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.000178 lbs PE/lb sand and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines). If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-5.

      The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

g. Emission Limitation: 0.3 lb SO2/hr, 1.31 tons/yr SO2

Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.0025 lbs SO2/lb sand, applying a 97% overall control efficiency and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines).

The ton/yr limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 & 6.

h. Emission Limitation: 7.3 tons OC/yr

Compliance Method: The emission limitation was developed by multiplying the daily emission limitation of 40 lbs by a maximum operating schedule of 365 days and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation compliance will also be shown with the annual limitation.

i. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average

Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P457- malleable iron cold box core machine 2	OAC rule 3745-31-05	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P456) was evaluated based on the actual materials (resin materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

   a. Pollutant: cumene
   TLV (mg/m3): 246
   Maximum Hourly Emission Rate (lbs/hr): 0.48
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 22.8
   MAGLC (ug/m3): 5857

   b. Pollutant: acrylic acid
   TLV (mg/m3): 5.89
   Maximum Hourly Emission Rate (lbs/hr): 0.048
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3
   MAGLC (ug/m3): 140.24

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

   a. changes in the composition of the materials used (resin materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

   b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P458 - malleable iron cold box core machine 3	OAC rule 3745-31-05(C)	28.99 tons of organic compounds (OC) per rolling 12-month period, from all the emissions identified in A.I.2.b. (See A.I.2.c) 5.63 tons of particulate emissions (PE) per rolling 12-month period, from all the emissions unit identified in A.I.2.b. (See A.I.2.d)
	OAC rule 3745-31-05(A)	See A.I.2.a 0.71 lbs PE/hour (hr), 3.11 tons PE/yr (See A.I.2.d) 0.3 lb SO2/hr, 1.31 tons SO2/yr 7.30 tons OC/yr Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average.
	OAC rule 3745-17-07(A)	See A.I.2.e
	OAC rule 3745-17-11(B)	See A.I.2.e
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day
	OAC rule 3745-18-06(E)	See A.I.2.e

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements have been determined to be the use of a catalyst gas scrubber designed for the control of catalyst gas on cold box core machines.

2.b The emissions of OC and PE from emissions units P456, P457, P458, P459 & P460 combined shall not exceed the following based on a sand processing restriction (See A.II.1):

i. 28.99 tons OC per rolling 12-month period

ii. 5.63 tons PE per rolling 12-month period

The OC and PE rolling 12-month limitations are federally enforceable limitations established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicability.

2.c For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.d All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

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

II. Operational Restrictions

1. The annual sand processed for emissions units P456, P457, P458, P459 & P460, combined, shall not exceed 87,600 tons, based upon a rolling, 12-month summation of sand throughput.

To ensure federal enforceability during the first 12 calendar months of operation, the permittee shall not exceed the sand throughput levels specified in the following table:

Month(s)	Maximum Cumulative Sand processed (tons)
1	7300
1-2	14,600
1-3	21,900
1-4	29,200
1-5	36,500
1-6	43,800

1-7	51,100
1-8	58,400
1-9	65,700
1-10	73,000
1-11	80,300
1-12	87,600

After the first 12 calendar months of operation, compliance with the annual sand restriction shall be based upon a rolling 12-month summation of monthly sand processed.

2. The pH and liquor flow rate of the catalyst gas scrubbers shall be maintained at the following levels:

   a. the catalyst gas scrubber liquor pH shall be continuously maintained between 9 and 13 while this emissions unit is in operation; and

   b. the catalyst gas scrubber liquor flow rate shall be continuously maintained at a value of not less than 25 gallons per minute at all times while this emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall collect and record the following each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the total sand processed, in tons;

   b. for the first 12 months of operation, the cumulative sand processed, in tons; and

   c. after the first 12 months operation, the sand processed, in tons, based on a rolling, 12-month summation of the sand processed.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the quantity of sand processed in the malleable iron cold box core machines, in tons;

   b. the calculated emission rate for OC, in tons (2.a x 0.000331 ton OC/ton sand processed);

   c. the calculated emission rate for PE, in tons, (2.a x 0.0000643 ton PE/ton sand processed);

   d. the annual OC emission rate, in tons, based upon the rolling, 12-month summation of monthly emission rates; and

e. the annual PE emission rate, in tons, based upon the rolling 12-month summation of monthly emission rates.

3. The permittee shall calculate and record the following information each day for this emissions unit:

   a. the name and identification of each core produced in this emissions unit;

   b. the amount of sand processed in this emissions unit; and

   c. the total OC emissions [3.b x 0.009 lbs OC/lbs sand processed], in pounds.

4. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

5. The permittee shall collect and record the following information each day:

   a. the pH of the catalyst gas scrubber, once per shift each day;

   b. the catalyst gas scrubber liquor flow rate, in gallons per minute, on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports, which identify all exceedances of the following:

   a. for the first 12 calendar months of operation, the maximum allowable cumulative sand throughput restriction;

   b. after the first 12 calendar months of operation, the rolling, 12-month sand throughput restriction;

   c. the rolling, 12-month emission limitations for PE & OC;

   d. all exceedances of the daily OC emission limitation of 40.0 pounds; and

   e. all periods of time during which the scrubber liquor pH and flow rate did not comply with the requirements specified above.

   These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations/usage restrictions of this permit shall be determined in accordance with the following compliance methods:

   a. Emission Limitation: 87,600 tons of sand per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.1.

   b. Emission Limitation: 28.99 tons of OC per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   c. Emission Limitation: 5.63 tons of PE per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   d. Emission Limitation: 8 lbs OC/hr

      Compliance Method: The hourly OC emission limitation exceeds the emissions unit's potential to emit*. Therefore, no hourly record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

      * The potential to emit is based on a company-supplied emission factor of 0.0009 lbs of OC/lb-sand and a maximum production rate of 4000 lbs-sand/hr.

      If required, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with Methods 18, 25, or 25A of 40 CFR, Part 60, Appendix A.

   e. Emission Limitation: 40.0 lbs of OC/day

      Applicable Compliance Method
      Compliance with the daily emission limitation shall be based upon record keeping requirements specified in Section A.III.3.

   f. Emission Limitation: 0.71 lbs PE/hr, 3.11 tons PE/year

      Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.000178 lbs PE/lb sand and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines). If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-5.

      The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

g. Emission Limitation: 0.3 lb SO2/hr, 1.31 tons/yr SO2

Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.0025 lbs SO2/lb sand, applying a 97% overall control efficiency and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines).

The ton/yr limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 & 6.

h. Emission Limitation: 7.3 tons OC/yr

Compliance Method: The emission limitation was developed by multiplying the daily emission limitation of 40 lbs by a maximum operating schedule of 365 days and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation compliance will also be shown with the annual limitation.

i. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average

Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P458- malleable iron cold box core machine 3	OAC rule 3745-31-05	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P456) was evaluated based on the actual materials (resin materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

   a. Pollutant: cumene
   TLV (mg/m3): 246
   Maximum Hourly Emission Rate (lbs/hr): 0.48
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 22.8
   MAGLC (ug/m3): 5857

   b. Pollutant: acrylic acid
   TLV (mg/m3): 5.89
   Maximum Hourly Emission Rate (lbs/hr): 0.048
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3
   MAGLC (ug/m3): 140.24

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

   a. changes in the composition of the materials used (resin materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

   b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P459 - malleable iron cold box core machine 4	OAC rule 3745-31-05(C)	28.99 tons of organic compounds (OC) per rolling 12-month period, from all the emissions identified in A.I.2.b. (See A.I.2.c) 5.63 tons of particulate emissions (PE) per rolling 12-month period, from all the emissions unit identified in A.I.2.b. (See A.I.2.d)
	OAC rule 3745-31-05(A)	See A.I.2.a 0.71 lbs PE/hour (hr), 3.11 tons PE/yr (See A.I.2.d) 0.3 lb SO2/hr, 1.31 tons SO2/yr 7.30 tons OC/yr Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average.
	OAC rule 3745-17-07(A)	See A.I.2.e
	OAC rule 3745-17-11(B)	See A.I.2.e
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day
	OAC rule 3745-18-06(E)	See A.I.2.e

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements have been determined to be the use of a catalyst gas scrubber designed for the control of catalyst gas on cold box core machines.

2.b The emissions of OC and PE from emissions units P456, P457, P458, P459 & P460 combined shall not exceed the following based on a sand processing restriction (See A.II.1):

i. 28.99 tons OC per rolling 12-month period

ii. 5.63 tons PE per rolling 12-month period

The OC and PE rolling 12-month limitations are federally enforceable limitations established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicability.

2.c For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.d All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

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

II. Operational Restrictions

1. The annual sand processed for emissions units P456, P457, P458, P459 & P460, combined, shall not exceed 87,600 tons, based upon a rolling, 12-month summation of sand throughput.

To ensure federal enforceability during the first 12 calendar months of operation, the permittee shall not exceed the sand throughput levels specified in the following table:

Month(s)	Maximum Cumulative Sand processed (tons)
1	7300
1-2	14,600
1-3	21,900
1-4	29,200
1-5	36,500
1-6	43,800

1-7	51,100
1-8	58,400
1-9	65,700
1-10	73,000
1-11	80,300
1-12	87,600

After the first 12 calendar months of operation, compliance with the annual sand restriction shall be based upon a rolling 12-month summation of monthly sand processed.

2. The pH and liquor flow rate of the catalyst gas scrubbers shall be maintained at the following levels:

   a. the catalyst gas scrubber liquor pH shall be continuously maintained between 9 and 13 while this emissions unit is in operation; and

   b. the catalyst gas scrubber liquor flow rate shall be continuously maintained at a value of not less than 25 gallons per minute at all times while this emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall collect and record the following each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the total sand processed, in tons;

   b. for the first 12 months of operation, the cumulative sand processed, in tons; and

   c. after the first 12 months operation, the sand processed, in tons, based on a rolling, 12-month summation of the sand processed.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the quantity of sand processed in the malleable iron cold box core machines, in tons;

   b. the calculated emission rate for OC, in tons (2.a x 0.000331 ton OC/ton sand processed);

   c. the calculated emission rate for PE, in tons, (2.a x 0.0000643 ton PE/ton sand processed);

   d. the annual OC emission rate, in tons, based upon the rolling, 12-month summation of monthly emission rates; and

e. the annual PE emission rate, in tons, based upon the rolling 12-month summation of monthly emission rates.

3. The permittee shall calculate and record the following information each day for this emissions unit:

   a. the name and identification of each core produced in this emissions unit;

   b. the amount of sand processed in this emissions unit; and

   c. the total OC emissions [3.b x 0.009 lbs OC/lbs sand processed], in pounds.

4. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

5. The permittee shall collect and record the following information each day:

   a. the pH of the catalyst gas scrubber, once per shift each day;

   b. the catalyst gas scrubber liquor flow rate, in gallons per minute, on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports, which identify all exceedances of the following:

   a. for the first 12 calendar months of operation, the maximum allowable cumulative sand throughput restriction;

   b. after the first 12 calendar months of operation, the rolling, 12-month sand throughput restriction;

   c. the rolling, 12-month emission limitations for PE & OC;

   d. all exceedances of the daily OC emission limitation of 40.0 pounds; and

   e. all periods of time during which the scrubber liquor pH and flow rate did not comply with the requirements specified above.

   These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations/usage restrictions of this permit shall be determined in accordance with the following compliance methods:

   a. Emission Limitation: 87,600 tons of sand per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.1.

   b. Emission Limitation: 28.99 tons of OC per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   c. Emission Limitation: 5.63 tons of PE per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   d. Emission Limitation: 8 lbs OC/hr

      Compliance Method: The hourly OC emission limitation exceeds the emissions unit's potential to emit*. Therefore, no hourly record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

      * The potential to emit is based on a company-supplied emission factor of 0.0009 lbs of OC/lb-sand and a maximum production rate of 4000 lbs-sand/hr.

      If required, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with Methods 18, 25, or 25A of 40 CFR, Part 60, Appendix A.

   e. Emission Limitation: 40.0 lbs of OC/day

      Applicable Compliance Method
      Compliance with the daily emission limitation shall be based upon record keeping requirements specified in Section A.III.3.

   f. Emission Limitation: 0.71 lbs PE/hr, 3.11 tons PE/year

      Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.000178 lbs PE/lb sand and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines). If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-5.

      The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

g. Emission Limitation: 0.3 lb SO2/hr, 1.31 tons/yr SO2

Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.0025 lbs SO2/lb sand, applying a 97% overall control efficiency and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines).

The ton/yr limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 & 6.

h. Emission Limitation: 7.3 tons OC/yr

Compliance Method: The emission limitation was developed by multiplying the daily emission limitation of 40 lbs by a maximum operating schedule of 365 days and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation compliance will also be shown with the annual limitation.

i. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average

Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P459- malleable iron cold box core machine 4	OAC rule 3745-31-05	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P456) was evaluated based on the actual materials (resin materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

   a. Pollutant: cumene
   TLV (mg/m3): 246
   Maximum Hourly Emission Rate (lbs/hr): 0.48
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 22.8
   MAGLC (ug/m3): 5857

   b. Pollutant: acrylic acid
   TLV (mg/m3): 5.89
   Maximum Hourly Emission Rate (lbs/hr): 0.048
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3
   MAGLC (ug/m3): 140.24

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

   a. changes in the composition of the materials used (resin materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

   b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P460 - malleable iron cold box core machine 5	OAC rule 3745-31-05(C)	28.99 tons of organic compounds (OC) per rolling 12-month period, from all the emissions identified in A.I.2.b. (See A.I.2.c) 5.63 tons of particulate emissions (PE) per rolling 12-month period, from all the emissions unit identified in A.I.2.b. (See A.I.2.d)
	OAC rule 3745-31-05(A)	See A.I.2.a 0.71 lbs PE/hour (hr), 3.11 tons PE/yr (See A.I.2.d) 0.3 lb SO2/hr, 1.31 tons SO2/yr 7.30 tons OC/yr Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average.
	OAC rule 3745-17-07(A)	See A.I.2.e
	OAC rule 3745-17-11(B)	See A.I.2.e
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day
	OAC rule 3745-18-06(E)	See A.I.2.e

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements have been determined to be the use of a catalyst gas scrubber designed for the control of catalyst gas on cold box core machines.

2.b The emissions of OC and PE from emissions units P456, P457, P458, P459 & P460 combined shall not exceed the following based on a sand processing restriction (See A.II.1):

i. 28.99 tons OC per rolling 12-month period

ii. 5.63 tons PE per rolling 12-month period

The OC and PE rolling 12-month limitations are federally enforceable limitations established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicability.

2.c For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.d All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

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

II. Operational Restrictions

1. The annual sand processed for emissions units P456, P457, P458, P459 & P460, combined, shall not exceed 87,600 tons, based upon a rolling, 12-month summation of sand throughput.

To ensure federal enforceability during the first 12 calendar months of operation, the permittee shall not exceed the sand throughput levels specified in the following table:

Month(s)	Maximum Cumulative Sand processed (tons)
1	7300
1-2	14,600
1-3	21,900
1-4	29,200
1-5	36,500
1-6	43,800

1-7	51,100
1-8	58,400
1-9	65,700
1-10	73,000
1-11	80,300
1-12	87,600

After the first 12 calendar months of operation, compliance with the annual sand restriction shall be based upon a rolling 12-month summation of monthly sand processed.

2. The pH and liquor flow rate of the catalyst gas scrubbers shall be maintained at the following levels:

   a. the catalyst gas scrubber liquor pH shall be continuously maintained between 9 and 13 while this emissions unit is in operation; and

   b. the catalyst gas scrubber liquor flow rate shall be continuously maintained at a value of not less than 25 gallons per minute at all times while this emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall collect and record the following each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the total sand processed, in tons;

   b. for the first 12 months of operation, the cumulative sand processed, in tons; and

   c. after the first 12 months operation, the sand processed, in tons, based on a rolling, 12-month summation of the sand processed.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P456, P457, P458, P459 & P460, combined:

   a. the quantity of sand processed in the malleable iron cold box core machines, in tons;

   b. the calculated emission rate for OC, in tons (2.a x 0.000331 ton OC/ton sand processed);

   c. the calculated emission rate for PE, in tons, (2.a x 0.0000643 ton PE/ton sand processed);

   d. the annual OC emission rate, in tons, based upon the rolling, 12-month summation of monthly emission rates; and

e. the annual PE emission rate, in tons, based upon the rolling 12-month summation of monthly emission rates.

3. The permittee shall calculate and record the following information each day for this emissions unit:

   a. the name and identification of each core produced in this emissions unit;

   b. the amount of sand processed in this emissions unit; and

   c. the total OC emissions [3.b x 0.009 lbs OC/lbs sand processed], in pounds.

4. The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

5. The permittee shall collect and record the following information each day:

   a. the pH of the catalyst gas scrubber, once per shift each day;

   b. the catalyst gas scrubber liquor flow rate, in gallons per minute, on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports, which identify all exceedances of the following:

   a. for the first 12 calendar months of operation, the maximum allowable cumulative sand throughput restriction;

   b. after the first 12 calendar months of operation, the rolling, 12-month sand throughput restriction;

   c. the rolling, 12-month emission limitations for PE & OC;

   d. all exceedances of the daily OC emission limitation of 40.0 pounds; and

   e. all periods of time during which the scrubber liquor pH and flow rate did not comply with the requirements specified above.

   These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations/usage restrictions of this permit shall be determined in accordance with the following compliance methods:

   a. Emission Limitation: 87,600 tons of sand per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.1.

   b. Emission Limitation: 28.99 tons of OC per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   c. Emission Limitation: 5.63 tons of PE per rolling 12-month period

      Compliance Method: Compliance shall be demonstrated by the record keeping requirements specified in section A.III.2.

   d. Emission Limitation: 8 lbs OC/hr

      Compliance Method: The hourly OC emission limitation exceeds the emissions unit's potential to emit*. Therefore, no hourly record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

      * The potential to emit is based on a company-supplied emission factor of 0.0009 lbs of OC/lb-sand and a maximum production rate of 4000 lbs-sand/hr.

      If required, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with Methods 18, 25, or 25A of 40 CFR, Part 60, Appendix A.

   e. Emission Limitation: 40.0 lbs of OC/day

      Applicable Compliance Method
      Compliance with the daily emission limitation shall be based upon record keeping requirements specified in Section A.III.3.

   f. Emission Limitation: 0.71 lbs PE/hr, 3.11 tons PE/year

      Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.000178 lbs PE/lb sand and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines). If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-5.

      The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

g. Emission Limitation: 0.3 lb SO2/hr, 1.31 tons/yr SO2

Compliance Method: Compliance with the hourly emission limitation may be demonstrated by multiplying the maximum hourly sand usage rate of 20,000 lbs/hr by the an emission factor of 0.0025 lbs SO2/lb sand, applying a 97% overall control efficiency and dividing by 5 (emissions for this emissions unit is one fifth of the total of all 5 core machines).

The ton/yr limit was established by multiplying the lb/hr limit by the maximum operating schedule of 8760 hrs/yr and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 & 6.

h. Emission Limitation: 7.3 tons OC/yr

Compliance Method: The emission limitation was developed by multiplying the daily emission limitation of 40 lbs by a maximum operating schedule of 365 days and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation compliance will also be shown with the annual limitation.

i. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 10% opacity as a six-minute average

Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P460- malleable iron cold box core machine 5	OAC rule 3745-31-05	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P456) was evaluated based on the actual materials (resin materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

   a. Pollutant: cumene
   TLV (mg/m3): 246
   Maximum Hourly Emission Rate (lbs/hr): 0.48
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 22.8
   MAGLC (ug/m3): 5857

   b. Pollutant: acrylic acid
   TLV (mg/m3): 5.89
   Maximum Hourly Emission Rate (lbs/hr): 0.048
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3
   MAGLC (ug/m3): 140.24

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

   a. changes in the composition of the materials used (resin materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

   b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P902 - malleable iron line 1 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)	OAC rule 3745-31-05(C)	Preheater Emissions: 39.50 tons nitrogen oxide (NOx) per rolling 12-month period based on natural gas usage restrictions (See A.I.2.a)
	OAC rule 3745-31-05(A)(3)	See A.I.2.b. Fugitive Emissions: 0.57 tons fugitive particulate emissions (PE)/year (yr) Electric Induction furnace baghouse emissions: 0.29 lb PE/hr, 1.27 tons PE/yr [See A.I.2.b] 0.02 lb Lead (Pb)/hr, 0.09 ton Pb/yr Preheater emissions: 0.20 lb PE/hr, 0.88 ton/yr PE (See A.I.2.c) 0.002 lb Pb/hr, 0.009 ton/yr Pb 1.74 lbs organic compounds (OC)/hr, 7.62 ton/yr OC (See A.I.2.d)

	0.15 lb carbon monoxide (CO)/hr, 0.66 ton/yr CO 3.58 lbs nitrogen oxide (NOx)/hr, 15.68 ton/yr NOx <u>Launders stack emissions:</u> 0.01 lb PE/hr, 0.04 ton/yr PE
OAC rule 3745-17-07(B)	Visible particulate emissions shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emissions unit (Furnace Baghouse 1stack and Launders stack) Visible PE of fugitive dust shall not exceed 20% opacity as a three-minute average(See A.I.2.e)
OAC rule 3745-17-07(A)	See A.I.2.f
OAC rule 3745-17-08(B)	See A.I.2.f
OAC rule 3745-17-11(B)	See A.I.2.f
OAC rule 3745-17-10(B)	See A.I.2.f
OAC rule 3745-23-06(B)	See A.I.2.g
OAC rule 3745-21-08(B)	See A.I.2.g
OAC rule 3745-18-06(E)	See A.I.2.h
40 CFR Part 63, Subpart EEEEE	See A.I.2.i

2. Additional Terms and Conditions

2.a The emissions of NOx from emission units P902, P903, and P904 combined shall not exceed 39.50 tons per rolling 12-month period based on a natural gas usage restriction (See A.II.1).

The 39.50 tons of NOx per rolling 12-month period is a federally enforceable limitation established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicablity.

2.b The "Best Available Technology" (BAT) control requirement for this emissions unit has been determined to be:

i. for the electric induction furnace, the use of a baghouse (Furnace Baghouse 1) with a capture efficiency of 99% and control efficiency of 99.5% for PE.

ii. for the preheater, the use of a afterburner (Preheater Oxidizer 1) with a capture efficiency of 99% and a control efficiency of 96% for CO, 97% for OC & the use of a baghouse (Furnace Baghouse 1) with a capture efficiency of 99% and control efficiency of 99.5% for PE.

iii. for the moveable launder, the use of a baghouse (Holding furnace baghouse) with a capture efficiency of 98% and control efficiency of 97.5% for a over-all control efficiency of 98.5% and continuous draft sufficient to minimize visible emissions consistent with good engineering design.

2.c All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM 10).

2.d For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.e The visible fugitive PE limitation shall apply to the following:

i. The egress points (i.e., building windows, doors, roof monitors, etc.) serving the malleable iron operations; and

ii. visible fugitive PE due solely to the operations of the malleable iron operations.

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

2.g The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) and the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as revision to the Ohio's State Implementation Plant (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.h This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(A).

2.i Each existing affected source must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart, that applies, no later than April 23, 2007. Each existing affected source must comply with the work practices standards in 40 CFR Part 63.7700(b) or (c), as applicable, no later than April 22, 2005. (See Part II of this permit)

II. Operational Restrictions

1. The maximum annual natural gas usage for emissions units P902, P903 & P904, combined, shall not exceed 790 mmCf/yr, based upon a rolling, 12-month summation of natural gas usage.

   To ensure enforceability during the first 12 calendar months of operation under the provisions of this permit, the permittee shall not exceed the natural gas usage levels specified in the following table for emissions unit P902, P903 & P904, combined:

Month(s)	Maximum Cumulative natual gas usage (mmCf)
1	65.8
1-2	131.6
1-3	197.4
1-4	263.2
1-5	329.0
1-6	394.8
1-7	460.6
1-8	526.4
1-9	592.2
1-10	658.0
1-11	723.8
1-12	790.0

   After the first 12 calendar months of operation under the provisions of this permit, compliance with the annual natural gas usage shall be based upon a rolling 12-month summation of the natural gas usage.

2. The pressure drop across each baghouse cell (Furnace Baghouse 1) shall be maintained within the range of 1-8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P902, P903 and P904, combined:

   a. the quantity of natural gas combusted, in mmCf;

b. for the first 12 months of operations under the provisions of this permit, the cumulative monthly natural gas usage, in mmCf; and

c. after the first 12 months of operation under the provisions of this permit, the annual natural gas usage, in mmCf, based on a rolling, 12-month summation of the monthly natural gas usage.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P902, P903 and P904, combined:

a. the calculated NO_x emission rate, in tons per month;

b. for the first 12 months of operation under the provisions of this permit, the cumulative monthly NO_x emission rate, in tons; and

c. after the first 12 months of operation, under the provisions of this permit, the annual NO_x emission rate, based on a rolling, 12-month summation of the monthly NO_x emissions.

3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across each baghouse cell while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse cell on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify exceedances of any of the following:

a. for the first 12 calendar months of operation, all exceedances of the allowable cumulative natural gas usage, for all the preheaters; and

b. the annual natural gas usage restrictions and emission limitation per rolling 12-month period, for all the preheaters.

2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across a baghouse cell did not comply with the allowable range specified above.

V. Testing Requirements

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

a. Fugitive Emissions

i. Emission Limitation: 0.57 ton/yr fugitive PE

Applicable Compliance Methods: Compliance with the emission limitation may be demonstrated by multiplying the maximum hourly process rate of 65 tons/hr, the emission factor 0.0030 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 08/95), the maximum operating schedule of 8760 hrs/yr and tons/2000 lbs and dividing by 3 (emissions for this emissions unit is one third of the total process rate for the malleable operations which will be distributed on the three lines) and multiplying by 2 to account for emissions from both the staging and charging conveyors.

b. Electric Induction Furnace Baghouse Emissions:

i. Emission Limitation: 0.29 lb PE/hr, 1.27 ton/yr PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.90 lb PE/ton metal produced (AP-42, Table 12.10-5, revised 01/95) and applying an overall control efficiency of 98.5% for use of a baghouse. If required, compliance with the lb/hr limitation shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

ii. Emission Limitation: 0.02 lb Pb/hr, 0.09 ton Pb/yr

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.0545 lb Pb/ton metal produced (AP-42, Table 12.10-5, revised 01/95) and applying an overall control efficiency of 98.5%, for use of a baghouse. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 and 12.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Preheater emissions:

i. Emission Limitation: 39.50 tons NO_x per rolling 12-month period from the for emissions units P902, P903 & P904, combined

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the record keeping requirements specified in sections A.III.2.

ii. Emission Limitation: 0.20 lb PE/hr, 0.88 tpy PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.60 lb PE/ton metal produced (AP-42, Table 12.10-7, revised 01/95) and applying an overall control efficiency of 98.5%, for use of a baghouse. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

iii. Emission Limitation: 0.002 lb Pb/hr, 0.009 ton Pb/yr

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by assuming Pb is 1% of particulate emissions per AP-42, Table 12.10-7, revised 01/95. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 and 12.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

iv. Emission Limitation: 1.74 lbs VOC/hr, 7.62 tpy VOC

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 2 lbs PE/ton metal produced (AP-42, Table 12.10-7, revised 01/95) and applying an overall control efficiency of 96%, for use of an afterburner. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

v. Emission Limitation: 3.58 lbs NOx/hr, 15.68 tpy NOx

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by dividing the maximum hourly gas burning capacity of the emissions unit (36.5 mm btu/hr) by heating value of natural gas (1020 mmbtu/mm cu. ft) and multiplying by the AP-42, Chapter 1.4-1 (revised 7/98) emission factor for natural gas combustion [100 lbs NOx/mm cu. ft]. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

vi. Emission Limitation: 0.15 lb CO/hr, 0.66 tpy CO

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by dividing the maximum hourly gas burning capacity of the emissions unit (36.5 mm btu/hr) by heating value of natural gas (1020 mmbtu/mm cu. ft), multiplying by the AP-42, Chapter 1.4-1 (revised 7/98) emission factor for natural gas combustion [84 lbs CO/mm cu. ft] and applying an overall control efficiency of 95%, for use of an afterburner. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 10 of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Launders stack emissions:

i. Emission Limitation: 0.01 lb PE/hr, 0.04 ton/yr PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.0197 lb PE/ton metal produced (company supplied emission factor from emissions testing on holding furnace 3ML-EF13, 12/09/98) and applying an overall control efficiency of 97.5%, for use of a baghouse. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

e. Emission Limitation: Visible particulate emissions shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emission unit (furnace baghouse 2 stack and launders stack)

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

f. Emission Limitation: Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average

Applicable Compliance Method: OAC rule 3745-17-03(B)(3)

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P902 - malleable iron line 1 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P903 - malleable iron line 2 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)	OAC rule 3745-31-05(C)	Preheater Emissions: 39.50 tons nitrogen oxide (NOx) per rolling 12-month period based on natural gas usage restrictions (See A.I.2.a)
	OAC rule 3745-31-05(A)(3)	See A.I.2.b. Fugitive Emissions: 0.57 tons fugitive particulate emissions (PE)/year (yr) Electric Induction furnace baghouse emissions: 0.29 lb PE/hr, 1.27 tons PE/yr [See A.I.2.b] 0.02 lb Lead (Pb)/hr, 0.09 ton Pb/yr Preheater emissions: 0.20 lb PE/hr, 0.88 ton/yr PE (See A.I.2.c) 0.002 lb Pb/hr, 0.009 ton/yr Pb 1.74 lbs organic compounds (OC)/hr, 7.62 ton/yr OC (See A.I.2.d)

	0.15 lb carbon monoxide (CO)/hr, 0.66 ton/yr CO 3.58 lbs nitrogen oxide (NOx)/hr, 15.68 ton/yr NOx <u>Launders stack emissions:</u> 0.01 lb PE/hr, 0.04 ton/yr PE
OAC rule 3745-17-07(B)	Visible particulate emissions shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emissions unit (Furnace Baghouse 1stack and Launders stack) Visible PE of fugitive dust shall not exceed 20% opacity as a three-minute average(See A.I.2.e)
OAC rule 3745-17-07(A)	See A.I.2.f
OAC rule 3745-17-08(B)	See A.I.2.f
OAC rule 3745-17-11(B)	See A.I.2.f
OAC rule 3745-17-10(B)	See A.I.2.f
OAC rule 3745-23-06(B)	See A.I.2.g
OAC rule 3745-21-08(B)	See A.I.2.g
OAC rule 3745-18-06(E)	See A.I.2.h
40 CFR Part 63, Subpart EEEEE	See A.I.2.i

2. Additional Terms and Conditions

2.a The emissions of NOx from emission units P902, P903, and P904 combined shall not exceed 39.50 tons per rolling 12-month period based on a natural gas usage restriction (See A.II.1).

The 39.50 tons of NOx per rolling 12-month period is a federally enforceable limitation established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicablity.

2.b The "Best Available Technology" (BAT) control requirement for this emissions unit has been determined to be:

i. for the electric induction furnace, the use of a baghouse (Furnace Baghouse 1) with a capture efficiency of 99% and control efficiency of 99.5% for PE.

ii. for the preheater, the use of a afterburner (Preheater Oxidizer 1) with a capture efficiency of 99% and a control efficiency of 96% for CO, 97% for OC & the use of a baghouse (Furnace Baghouse 1) with a capture efficiency of 99% and control efficiency of 99.5% for PE.

iii. for the moveable launder, the use of a baghouse (Holding furnace baghouse) with a capture efficiency of 98% and control efficiency of 97.5% for a over-all control efficiency of 98.5% and continuous draft sufficient to minimize visible emissions consistent with good engineering design.

2.c All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM 10).

2.d For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.e The visible fugitive PE limitation shall apply to the following:

i. The egress points (i.e., building windows, doors, roof monitors, etc.) serving the malleable iron operations; and

ii. visible fugitive PE due solely to the operations of the malleable iron operations.

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

2.g The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) and the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as revision to the Ohio's State Implementation Plant (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.h This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(A).

2.i Each existing affected source must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart, that applies, no later than April 23, 2007. Each existing affected source must comply with the work practices standards in 40 CFR Part 63.7700(b) or (c), as applicable, no later than April 22, 2005. (See Part II of this permit)

II. Operational Restrictions

1. The maximum annual natural gas usage for emissions units P902, P903 & P904, combined, shall not exceed 790 mmCf/yr, based upon a rolling, 12-month summation of natural gas usage.

   To ensure enforceability during the first 12 calendar months of operation under the provisions of this permit, the permittee shall not exceed the natural gas usage levels specified in the following table for emissions unit P902, P903 & P904, combined:

Month(s)	Maximum Cumulative natual gas usage (mmCf)
1	65.8
1-2	131.6
1-3	197.4
1-4	263.2
1-5	329.0
1-6	394.8
1-7	460.6
1-8	526.4
1-9	592.2
1-10	658.0
1-11	723.8
1-12	790.0

   After the first 12 calendar months of operation under the provisions of this permit, compliance with the annual natural gas usage shall be based upon a rolling 12-month summation of the natural gas usage.

2. The pressure drop across each baghouse cell (Furnace Baghouse 1) shall be maintained within the range of 1-8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P902, P903 and P904, combined:

   a. the quantity of natural gas combusted, in mmCf;

b. for the first 12 months of operations under the provisions of this permit, the cumulative monthly natural gas usage, in mmCf; and

c. after the first 12 months of operation under the provisions of this permit, the annual natural gas usage, in mmCf, based on a rolling, 12-month summation of the monthly natural gas usage.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P902, P903 and P904, combined:

a. the calculated NO_x emission rate, in tons per month;

b. for the first 12 months of operation under the provisions of this permit, the cumulative monthly NO_x emission rate, in tons; and

c. after the first 12 months of operation, under the provisions of this permit, the annual NO_x emission rate, based on a rolling, 12-month summation of the monthly NO_x emissions.

3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across each baghouse cell while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse cell on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify exceedances of any of the following:

a. for the first 12 calendar months of operation, all exceedances of the allowable cumulative natural gas usage, for all the preheaters; and

b. the annual natural gas usage restrictions and emission limitation per rolling 12-month period, for all the preheaters.

2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across a baghouse cell did not comply with the allowable range specified above.

V. Testing Requirements

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

a. Fugitive Emissions

i. Emission Limitation: 0.57 ton/yr fugitive PE

Applicable Compliance Methods: Compliance with the emission limitation may be demonstrated by multiplying the maximum hourly process rate of 65 tons/hr, the emission factor 0.0030 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 08/95), the maximum operating schedule of 8760 hrs/yr and tons/2000 lbs and dividing by 3 (emissions for this emissions unit is one third of the total process rate for the malleable operations which will be distributed on the three lines) and multiplying by 2 to account for emissions from both the staging and charging conveyors.

b. Electric Induction Furnace Baghouse Emissions:

i. Emission Limitation: 0.29 lb PE/hr, 1.27 ton/yr PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.90 lb PE/ton metal produced (AP-42, Table 12.10-5, revised 01/95) and applying an overall control efficiency of 98.5% for use of a baghouse. If required, compliance with the lb/hr limitation shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

ii. Emission Limitation: 0.02 lb Pb/hr, 0.09 ton Pb/yr

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.0545 lb Pb/ton metal produced (AP-42, Table 12.10-5, revised 01/95) and applying an overall control efficiency of 98.5%, for use of a baghouse. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 and 12.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Preheater emissions:

i. Emission Limitation: 39.50 tons NO_x per rolling 12-month period from the for emissions units P902, P903 & P904, combined

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the record keeping requirements specified in sections A.III.2.

ii. Emission Limitation: 0.20 lb PE/hr, 0.88 tpy PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.60 lb PE/ton metal produced (AP-42, Table 12.10-7, revised 01/95) and applying an overall control efficiency of 98.5%, for use of a baghouse. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

iii. Emission Limitation: 0.002 lb Pb/hr, 0.009 ton Pb/yr

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by assuming Pb is 1% of particulate emissions per AP-42, Table 12.10-7, revised 01/95. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 and 12.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

iv. Emission Limitation: 1.74 lbs VOC/hr, 7.62 tpy VOC

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 2 lbs PE/ton metal produced (AP-42, Table 12.10-7, revised 01/95) and applying an overall control efficiency of 96%, for use of an afterburner. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

v. Emission Limitation: 3.58 lbs NOx/hr, 15.68 tpy NOx

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by dividing the maximum hourly gas burning capacity of the emissions unit (36.5 mm btu/hr) by heating value of natural gas (1020 mmbtu/mm cu. ft) and multiplying by the AP-42, Chapter 1.4-1 (revised 7/98) emission factor for natural gas combustion [100 lbs NOx/mm cu. ft]. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

vi. Emission Limitation: 0.15 lb CO/hr, 0.66 tpy CO

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by dividing the maximum hourly gas burning capacity of the emissions unit (36.5 mm btu/hr) by heating value of natural gas (1020 mmbtu/mm cu. ft), multiplying by the AP-42, Chapter 1.4-1 (revised 7/98) emission factor for natural gas combustion [84 lbs CO/mm cu. ft] and applying an overall control efficiency of 95%, for use of an afterburner. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 10 of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Launders stack emissions:

i. Emission Limitation: 0.01 lb PE/hr, 0.04 ton/yr PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.0197 lb PE/ton metal produced (company supplied emission factor from emissions testing on holding furnace 3ML-EF13, 12/09/98) and applying an overall control efficiency of 97.5%, for use of a baghouse. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

e. Emission Limitation: Visible particulate emissions shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emission unit (furnace baghouse 2 stack and launders stack)

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

f. Emission Limitation: Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average

Applicable Compliance Method: OAC rule 3745-17-03(B)(3)

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P903 - malleable iron line 2 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P904 - malleable iron line 3 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)	OAC rule 3745-31-05(C)	Preheater Emissions: 39.50 tons nitrogen oxide (NOx) per rolling 12-month period based on natural gas usage restrictions (See A.I.2.a)
	OAC rule 3745-31-05(A)(3)	See A.I.2.b. Fugitive Emissions: 0.57 tons fugitive particulate emissions (PE)/year (yr) Electric Induction furnace baghouse emissions: 0.29 lb PE/hr, 1.27 tons PE/yr [See A.I.2.b] 0.02 lb Lead (Pb)/hr, 0.09 ton Pb/yr Preheater emissions: 0.20 lb PE/hr, 0.88 ton/yr PE (See A.I.2.c) 0.002 lb Pb/hr, 0.009 ton/yr Pb 1.74 lbs organic compounds (OC)/hr, 7.62 ton/yr OC (See A.I.2.d)

	0.15 lb carbon monoxide (CO)/hr, 0.66 ton/yr CO 3.58 lbs nitrogen oxide (NOx)/hr, 15.68 ton/yr NOx <u>Launders stack emissions:</u> 0.01 lb PE/hr, 0.04 ton/yr PE
OAC rule 3745-17-07(B)	Visible particulate emissions shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emissions unit (Furnace Baghouse 1stack and Launders stack) Visible PE of fugitive dust shall not exceed 20% opacity as a three-minute average(See A.I.2.e)
OAC rule 3745-17-07(A)	See A.I.2.f
OAC rule 3745-17-08(B)	See A.I.2.f
OAC rule 3745-17-11(B)	See A.I.2.f
OAC rule 3745-17-10(B)	See A.I.2.f
OAC rule 3745-23-06(B)	See A.I.2.g
OAC rule 3745-21-08(B)	See A.I.2.g
OAC rule 3745-18-06(E)	See A.I.2.h
40 CFR Part 63, Subpart EEEEE	See A.I.2.i

2. Additional Terms and Conditions

2.a The emissions of NOx from emission units P902, P903, and P904 combined shall not exceed 39.50 tons per rolling 12-month period based on a natural gas usage restriction (See A.II.1).

The 39.50 tons of NOx per rolling 12-month period is a federally enforceable limitation established for purposes of avoiding Prevention of Significant Deterioration (PSD) applicablity.

2.b The "Best Available Technology" (BAT) control requirement for this emissions unit has been determined to be:

i. for the electric induction furnace, the use of a baghouse (Furnace Baghouse 1) with a capture efficiency of 99% and control efficiency of 99.5% for PE.

ii. for the preheater, the use of a afterburner (Preheater Oxidizer 1) with a capture efficiency of 99% and a control efficiency of 96% for CO, 97% for OC & the use of a baghouse (Furnace Baghouse 1) with a capture efficiency of 99% and control efficiency of 99.5% for PE.

iii. for the moveable launder, the use of a baghouse (Holding furnace baghouse) with a capture efficiency of 98% and control efficiency of 97.5% for a over-all control efficiency of 98.5% and continuous draft sufficient to minimize visible emissions consistent with good engineering design.

2.c All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM 10).

2.d For the purposes of federal enforceability emission limitations on OC effectively restrict emissions of volatile organic compounds (VOC).

2.e The visible fugitive PE limitation shall apply to the following:

i. The egress points (i.e., building windows, doors, roof monitors, etc.) serving the malleable iron operations; and

ii. visible fugitive PE due solely to the operations of the malleable iron operations.

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

2.g The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) and the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as revision to the Ohio's State Implementation Plant (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.h This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(A).

2.i Each existing affected source must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart, that applies, no later than April 23, 2007. Each existing affected source must comply with the work practices standards in 40 CFR Part 63.7700(b) or (c), as applicable, no later than April 22, 2005. (See Part II of this permit)

II. Operational Restrictions

1. The maximum annual natural gas usage for emissions units P902, P903 & P904, combined, shall not exceed 790 mmCf/yr, based upon a rolling, 12-month summation of natural gas usage.

   To ensure enforceability during the first 12 calendar months of operation under the provisions of this permit, the permittee shall not exceed the natural gas usage levels specified in the following table for emissions unit P902, P903 & P904, combined:

Month(s)	Maximum Cumulative natual gas usage (mmCf)
1	65.8
1-2	131.6
1-3	197.4
1-4	263.2
1-5	329.0
1-6	394.8
1-7	460.6
1-8	526.4
1-9	592.2
1-10	658.0
1-11	723.8
1-12	790.0

   After the first 12 calendar months of operation under the provisions of this permit, compliance with the annual natural gas usage shall be based upon a rolling 12-month summation of the natural gas usage.

2. The pressure drop across each baghouse cell (Furnace Baghouse 1) shall be maintained within the range of 1-8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P902, P903 and P904, combined:

   a. the quantity of natural gas combusted, in mmCf;

b. for the first 12 months of operations under the provisions of this permit, the cumulative monthly natural gas usage, in mmCf; and

c. after the first 12 months of operation under the provisions of this permit, the annual natural gas usage, in mmCf, based on a rolling, 12-month summation of the monthly natural gas usage.

2. In addition to the above information, the permittee shall also record the following information each month for emissions units P902, P903 and P904, combined:

a. the calculated NO_x emission rate, in tons per month;

b. for the first 12 months of operation under the provisions of this permit, the cumulative monthly NO_x emission rate, in tons; and

c. after the first 12 months of operation, under the provisions of this permit, the annual NO_x emission rate, based on a rolling, 12-month summation of the monthly NO_x emissions.

3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across each baghouse cell while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse cell on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify exceedances of any of the following:

a. for the first 12 calendar months of operation, all exceedances of the allowable cumulative natural gas usage, for all the preheaters; and

b. the annual natural gas usage restrictions and emission limitation per rolling 12-month period, for all the preheaters.

2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across a baghouse cell did not comply with the allowable range specified above.

V. Testing Requirements

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

a. <u>Fugitive Emissions</u>

i. <u>Emission Limitation:</u> 0.57 ton/yr fugitive PE

Applicable Compliance Methods: Compliance with the emission limitation may be demonstrated by multiplying the maximum hourly process rate of 65 tons/hr, the emission factor 0.0030 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 08/95), the maximum operating schedule of 8760 hrs/yr and tons/2000 lbs and dividing by 3 (emissions for this emissions unit is one third of the total process rate for the malleable operations which will be distributed on the three lines) and multiplying by 2 to account for emissions from both the staging and charging conveyors.

b. Electric Induction Furnace Baghouse Emissions:

i. Emission Limitation: 0.29 lb PE/hr, 1.27 ton/yr PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.90 lb PE/ton metal produced (AP-42, Table 12.10-5, revised 01/95) and applying an overall control efficiency of 98.5% for use of a baghouse. If required, compliance with the lb/hr limitation shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

ii. Emission Limitation: 0.02 lb Pb/hr, 0.09 ton Pb/yr

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.0545 lb Pb/ton metal produced (AP-42, Table 12.10-5, revised 01/95) and applying an overall control efficiency of 98.5%, for use of a baghouse. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 and 12.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Preheater emissions:

i. Emission Limitation: 39.50 tons NO_x per rolling 12-month period from the for emissions units P902, P903 & P904, combined

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the record keeping requirements specified in sections A.III.2.

ii. Emission Limitation: 0.20 lb PE/hr, 0.88 tpy PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.60 lb PE/ton metal produced (AP-42, Table 12.10-7, revised 01/95) and applying an overall control efficiency of 98.5%, for use of a baghouse. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

iii. Emission Limitation: 0.002 lb Pb/hr, 0.009 ton Pb/yr

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by assuming Pb is 1% of particulate emissions per AP-42, Table 12.10-7, revised 01/95. If required, compliance with the lb/hr limitations shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4 and 12.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

iv. Emission Limitation: 1.74 lbs VOC/hr, 7.62 tpy VOC

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 2 lbs PE/ton metal produced (AP-42, Table 12.10-7, revised 01/95) and applying an overall control efficiency of 96%, for use of an afterburner. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

v. Emission Limitation: 3.58 lbs NOx/hr, 15.68 tpy NOx

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by dividing the maximum hourly gas burning capacity of the emissions unit (36.5 mm btu/hr) by heating value of natural gas (1020 mmbtu/mm

cu. ft) and multiplying by the AP-42, Chapter 1.4-1 (revised 7/98) emission factor for natural gas combustion [100 lbs NOx/mm cu. ft]. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

vi. Emission Limitation: 0.15 lb CO/hr, 0.66 tpy CO

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by dividing the maximum hourly gas burning capacity of the emissions unit (36.5 mm btu/hr) by heating value of natural gas (1020 mmbtu/mm cu. ft), multiplying by the AP-42, Chapter 1.4-1 (revised 7/98) emission factor for natural gas combustion [84 lbs CO/mm cu. ft] and applying an overall control efficiency of 95%, for use of an afterburner. If required, compliance with the hourly limitation shall be demonstrated in accordance with Methods 1-4, and 10 of 40 CFR Part 60, Appendix A.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Launders stack emissions:

i. Emission Limitation: 0.01 lb PE/hr, 0.04 ton/yr PE

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 21.67 tons of metal/hr by the emission factor 0.0197 lb PE/ton metal produced (company supplied emission factor from emissions testing on holding furnace 3ML-EF13, 12/09/98) and applying an overall control efficiency of 97.5%, for use of a baghouse. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1- 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hours/year and ton/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

e. Emission Limitation: Visible particulate emissions shall not exceed 10% opacity, as a six-minute average from the stack(s) servicing this emission unit (furnace baghouse 2 stack and launders stack)

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

f. Emission Limitation: Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average

Applicable Compliance Method: OAC rule 3745-17-03(B)(3)

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P904 - malleable iron line 3 (staging and charging conveyors, 36.5 mmBtu/hr preheater, 15 ton induction furnace and moveable launder)		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P905 - malleable iron casting finishing operations with 2 scrubbers (operation include one shaker, two didion drums, one unload conveyor and two casting conveyors)	OAC rule 3745-31-05(A)(3)	See A.I.2.a. Fugitive Emissions 0.86 tons fugitive particulate emissions (PE)/year (yr) Schneible 1 stack emissions 0.10 lbs PE/hr, 0.44 tons PE/yr (See A.I.2.b) Schneible 2 stack emissions 0.10 lbs PE/hr, 0.44 tons PE/yr (See A.I.2.b & c) Visible particulate emissions shall not exceed 10% opacity as a six-minute average from the stack(s) servicing this emissions unit (Schneible 1 & Schneible 2).
	OAC rule 3745-17-07(B)	Visible PE of fugitive dust shall not exceed 20% opacity as a three-minute average (See A.I.2.c)
	OAC rule 3745-17-07(A)	See A.I.2.d
	OAC rule 3745-17-11(B)	See A.I.2.d
	OAC rule 3745-17-08(B)	Less stringent than, or equal in stringency to, the control measure

	requirements established under OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a scrubber (Schneible 1) with an overall control efficiency of 97% for PE.

2.b All particulate emissions are inclusive of and considered to be particulate matter less than 10 microns in size (PM10).

2.c The visible fugitive particulate emissions limitation shall apply to the following:

i. the egress points (i.e., building windows, doors, roof monitors, etc.) serving the malleable iron operations.

ii. visible fugitive particulate emissions due solely to the operation of the malleable iron operations.

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

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. 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 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 abnormal 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.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving this emissions unit. The presence of 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 an 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.

3. The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the above-mentioned applicable requirements. Such modified visible emissions check frequencies would not be considered a minor or significant modification that would be subject to the Title V permit modification requirements in paragraphs (C)(1) and (C)(3) of OAC rule 3745-77-08.

IV. Reporting Requirements

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

V. Testing Requirements

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

   a. <u>Emission Limitation:</u> 0.86 ton/yr fugitive PE

      <u>Applicable Compliance Method:</u> Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 65 tons of metal per hour, the emission factor of 0.0030 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 01/95) for the unload conveyor, a maximum operating schedule of 8760 hrs/yr and tons/2000 lbs.

b. Emission Limitation: 0.10 lbs PE/hr, 0.44 ton/yr PE (Scheible 1)

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 65 tons of metal per hour by the emission factor of 0.025 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 01/95) for the shaker and 32.5 tons of metal per hour (half of the maximum process rate) by that same emission factor for didion drum 1 and applying the 97% control efficiency, for use of a scrubber. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and tons/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Emission Limitation: 0.10 lbs PE/hr, 0.44 ton/yr PE (Scheible 2)

Applicable Compliance Method: Compliance with the emission limitation may be demonstrated by multiplying the maximum production rate of 65 tons of metal per hour by the emission factor of 0.025 lb PE/ton metal processed (AP-42, Table 11.19.2-2, revised 01/95) for the conveyors and 32.5 tons of metal per hour (half of the maximum process rate) by that same emission factor for didion drum 2 and applying the 97% control efficiency, for use of a scrubber. If required, compliance shall be demonstrated in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

The ton/yr limit was established by multiplying the lb/hr limit by a maximum operating schedule of 8760 hrs/yr and tons/2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Emission Limitation: Visible PE shall not exceed 10% opacity, as a six-minute average from the stacks servicing this emissions unit (Schneible 1 & Scheible 2)

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9, 40 CFR Part 60, Appendix A.

e. Emission Limitation: Visible PE of fugitive dust shall not exceed 20% opacity as a three-minute average

Applicable Compliance Method: OAC rule 3745-17-03(B)(3)

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P905 - malleable iron casting finishing operations (shaker, 2 didion drum2, unload conveyor and 2 casting conveyors)		

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