

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Rochester Metal Products Corporation
616 Indiana Avenue
Rochester, Indiana 46975**

is hereby authorized to construct

- (a) Two (2) natural gas-fired preheaters/charge handling, known as 118, rated at a total of 21.5 million British thermal units per hour, equipped with a baghouse dust collector, known as DC9, preheaters installed in 1996 and prior 1974 and charge handling installed prior to 1974, exhausted through Stack SC-DC9, capacity increasing from 31 to 34 tons of metal per hour total.
- (b) Three (3) electric induction furnaces, known as 131, 132, and 133, modified in 1998, equipped with a baghouse dust collector, known as DC13, exhausted through Stack SC-DC13, capacity increasing from 10 to 13 tons of metal per hour total.
- (c) One (1) Hunter pouring and mold cooling operation, known as 313, installed in 1983, exhausted through Stacks SU-HP1 through SU-HP4, capacity increasing from 7.3 to 10.3 tons of metal per hour.
- (d) Hunter shakeout and casting/cooling operations, known as 314 and 315, equipped with one (1) baghouse dust collector, known as DC4, modified in 1994, exhausted through Stack SC-DC4, capacity increasing from 7.3 to 10.3 tons of metal per hour with 66 tons of sand per hour.
- (e) Grinding and cleaning operations, known as 411 and 412, equipped with two (2) baghouse dust collectors known as DC2 and DC5, modified in 1995, exhausted inside the building, capacity increasing from 6.60 to 8.34 tons of metal per hour.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP 049-9997-00002	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
 - (e) The Permittee has submitted their Part 70 (T 049-5999) application on May 31, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
- (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
- (a) In the event that ownership of this gray and ductile iron foundry is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
- (a) Violation of any conditions of this permit.

- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Malfunction Condition

7. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
 - (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
 - (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a) (1) through (6).
 - (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

8. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. A copy of this rule is enclosed. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

9. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

10. Particulate Matter (PM) Limitation

That pursuant to CP 049-8548-0002 issued October 17, 1997, the following conditions shall apply:

- (a) The amount of metal melted shall not exceed 5,153.8 tons per month. The baghouse DC-13 shall operate at all times that the melting process is in operation and the PM emissions from the melting process shall not exceed 1.43 pounds per hour. The PM₁₀ emissions from the melting process shall not exceed 1.43 pounds per hour.
- (b) The baghouse DC-9 shall operate at all times that the scrap and charge handling process is in operation and the PM emissions from the scrap and charge handling process shall not exceed 0.53 pounds per hour. The PM₁₀ emissions from the scrap and charge handling process shall not exceed 0.53 pounds per hour.

Compliance with this condition will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), not applicable. The PM limits in the above conditions will also satisfy the requirements of 326 IAC 6-3 (Process Operations).

Baghouse Operating Condition

11. That the baghouses shall be operated at all times when the charge handling, any of the three (3) electric induction furnaces, shakeout/casting cooling and the cleaning and finishing processes are in operation.

- (a) The Permittee shall take readings of the total static pressure drop across the baghouses, at least once daily. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across baghouses known as DC2, DC4, DC5, DC9 and DC13 shall be maintained within the range of 3 and 6 inches of water. The Preventive Maintenance Plan for these baghouses shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.

- (b) The instrument used for determining the pressure shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.
- (c) The gauge employed to take the pressure drop across the baghouses or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within ± 2 percent of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.
- (d) An inspection shall be performed each calendar quarter of all the baghouses. Defective bags shall be replaced. A record shall be kept of the results of the inspection and the number of bags replaced.
- (e) In the event that a bag's failure has been observed:
 - (i) The affected compartments will be shut down immediately until the failed units have been repaired or replaced.
 - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Visible Emission Notations

12. That visible emission notations of all exhaust to the atmosphere from baghouses known as DC2, DC4, DC5, DC9 and DC13 shall be performed once per day. A trained employee will record whether emissions are normal or abnormal.
- (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting start up or shut down time.
 - (b) In the case of batch or discontinuous operation, readings shall be taken during that part of the operation specified in the facility's specific condition prescribing visible emissions.
 - (c) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal and abnormal visible emissions for that specific process.
 - (d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Fugitive Dust Emissions

13. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Open Burning

14. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

15. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):
- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on May 31, 1996.
 - (b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.
 - (c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
 - (d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
 - (e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Verification of PM Emission Factor for Pouring and Mold Cooling

16. Pursuant to CP 049-8548-00002 issued on October 7, 1997, testing of the pouring and mold cooling operations for PM and PM₁₀ emissions shall be performed within 180 days of the submittal of the Affidavit of Construction for CP 049-8548-00002 and results shall verify that the PM and PM₁₀ emission factors for pouring and mold cooling do not exceed 1.286 pounds per ton of metal for PM and 0.0697 pounds per ton of metal for PM₁₀ in order that 326 IAC 2-2 is not applicable to this modification.

PM and PM₁₀

17. Since production was limited in CP-049-8548-00002 to avoid PSD, no change or modification which would increase potential PM and/or PM₁₀ emissions after controls from the equipment covered in this permit shall be allowed without first obtaining a PSD permit pursuant to 326 IAC 2-2.

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? _____, 100 LBS/HR VOC ? _____, 100 LBS/HR SULFUR DIOXIDE ? _____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? _____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ Rochester Metal Products Corporation _____ PHONE NO. _____ 219 - 233 - 0419 _____

LOCATION: (CITY AND COUNTY) _____ Rochester / Fulton _____

PERMIT NO. _____ CP 049-9997 _____ AFS PLANT ID: _____ 049-00002 _____ AFS POINT ID: _____ INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO₂, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2373)

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Rochester Metal Products Corporation
Source Location: 616 Indiana Avenue, Rochester, Indiana 46975
County: Fulton
Construction Permit No.: CP 049-9997-00002
SIC Code: 3321
Permit Reviewer: Mark L. Kramer

The Office of Air Management (OAM) has reviewed an application from Rochester Metal Products Corporation relating to the construction and operation of an increase of three (3) tons per hour melt capacity at an existing permitted gray and ductile iron foundry, consisting of the following equipment:

- (a) Two (2) natural gas-fired preheaters/charge handling, known as 118, rated at a total of 21.5 million British thermal units per hour, equipped with a baghouse dust collector, known as DC9, preheaters installed in 1996 and prior 1974 and charge handling installed prior to 1974, exhausted through Stack SC-DC9, capacity increasing from 31 to 34 tons of metal per hour total.
- (b) Three (3) electric induction furnaces, known as 131, 132, and 133, modified in 1998, equipped with a baghouse dust collector, known as DC13, exhausted through Stack SC-DC13, capacity increasing from 10 to 13 tons of metal per hour total.
- (c) One (1) Hunter pouring and mold cooling operation, known as 313, installed in 1983, exhausted through Stacks SU-HP1 through SU-HP4, capacity increasing from 7.3 to 10.3 tons of metal per hour.
- (d) Hunter shakeout and casting/cooling operations, known as 314 and 315, equipped with one (1) baghouse dust collector, known as DC4, modified in 1994, exhausted through Stack SC-DC4, capacity increasing from 7.3 to 10.3 tons of metal per hour with 66 tons of sand per hour.
- (e) Grinding and cleaning operations, known as 411 and 412, equipped with two (2) baghouse dust collectors known as DC2 and DC5, modified in 1995, exhausted inside the building, capacity increasing from 6.60 to 8.34 tons of metal per hour.

The emission limitations imposed by CP 049-8548-00002 issued on October 17, 1997 to avoid applicability of 326 IAC 2-2 will be retained such that although the hourly capacity is being increased there will be no net increase in emissions above those already permitted.

The molding, casting and cleaning operations covered in this proposed permit are the Hunter line operations and are not limited or covered in CP 049-8548-00002 which concerned the Disa line

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SC-DC9	Preheating/Charge Handling	55.0	4.0	55,000	175
SC-DC13	Three (3) Electric Induction Furnaces	50.0	3.33	30,000	175
SU-HP 1-4	Pouring/Mold Cooling	50.0	3.0	NA	110
SC-DC4	Shakeout/Casting Cooling	50.0	4.0	35,500	110
SC-DC2 & SC-DC5	Grinding & Cleaning	Inside	NA	80,180	100

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 4, 1998, with additional information received on November 9, 1998 and January 11 and 12, 1999.

Emissions Calculations

See pages 1 - 4 of 4 of Appendix A (Emissions Calculation Spreadsheets) for detailed calculations.

In contrast to the AP-42 emission factor of 4.2 pounds per ton for pouring and cooling, the emission calculations presented in the spreadsheets use 0.047 pounds per ton. This 0.047 pound per ton pouring and cooling emission factor originated from stack tests performed at the Auburn Foundry which had a combined melt rate of 32 tons per hour versus this modification to a total of 10.3 tons per hour. This emission factor was used in the two (2) construction permits CP 049-4112-00002 issued July 3, 1995 and CP 049-8548-00002 issued October 7, 1997. This 0.047 pound per ton emission factor will be verified via a stack test pursuant to CP 049-8548.

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/yr)	Potential Emissions (tons/yr)
Particulate Matter (PM)	120	192
Particulate Matter (PM ₁₀)	59.0	59.0
Sulfur Dioxide (SO ₂)	0.00	0.00
Volatile Organic Compounds (VOC)	6.62	6.62
Carbon Monoxide (CO)	0.00	0.00
Nitrogen Oxides (NO _x)	0.00	0.00
Single Hazardous Air Pollutant (HAP)	0.558	0.558
Combination of HAPS	0.558	0.558

- (a) Allowable emissions are determined from the applicability of Rule 326 IAC 6-3-2. See attached spreadsheets for detailed calculations.
- (b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of particulate matter are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Fulton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Fulton County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions

Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2, the fugitive PM emissions are counted toward determination of PSD applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	greater than 100
PM ₁₀	greater than 100
SO ₂	less than 100
VOC	less than 100
CO	less than 100
NO _x	less than 100

- (a) This existing source is a major stationary source because it is in one of the 28 listed source categories and at least one regulated pollutant is emitted at a rate of 100 tons per year or more.
- (b) These emissions were based on the application for this Construction Permit. The application stated that potential particulate matter emissions, after controls, for the existing permitted facilities are greater than 100 tons per year and therefore the existing source is a major PSD source.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (tons/yr)	PM₁₀ (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO_x (tons/yr)
Proposed Modification	0.00	0.00	0.00	0.00	0.00	0.00
Contemporaneous Increases	0.00	0.00	0.00	0.00	0.00	0.00
Contemporaneous Decreases	0.00	0.00	0.00	0.00	0.00	0.00
Net Emissions	0.00	0.00	0.00	0.00	0.00	0.00
PSD Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Due to the production limits that are retained from CP 049-8548-00002, there is no increase in the annual emissions from this proposed modification.

Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-049-5999-00002) application on May 31, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 60 applicable to this facility.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR Part 63 applicable to this facility.

State Rule Applicability

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This modification to an existing major PSD source is not major since the potential emissions after the production limit do not exceed the PSD significant levels and therefore this rule is not applicable. Conditions 11 (a) and (b) of CP 049-8548-00002 have been retained to result in a zero (0) emissions increase from this proposed modification. Conditions 11 (a) and (b) state:

That pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), the following conditions shall apply:

- (a) The amount of metal melted shall not exceed 5,153.8 tons per month. The baghouse DC-13 shall operate at all times that the melting process is in operation and the PM emissions from the melting process shall not exceed 1.43 pounds per hour. The PM₁₀ emissions from the melting process shall not exceed 1.43 pounds per hour.
- (b) The baghouse DC-9 shall operate at all times that the scrap and charge handling process is in operation and the PM emissions from the scrap and charge handling process shall not exceed 0.53 pounds per hour. The PM₁₀ emissions from the scrap and charge handling process shall not exceed 0.53 pounds per hour for the ten (10) ton increase.

Compliance with these conditions will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), not applicable. The PM limits in the above conditions will also satisfy the requirements of 326 IAC 6-3 (Process Operations).

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits potentially more than 100 tons per year of PM₁₀. Pursuant to this rule, the owner/ operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3-2 (Particulate Emission Limitations)

The foundry operations shall comply with 326 IAC 6-3-2(c). The particulate matter (PM) emissions from the foundry operations are subject to this rule and PM emissions shall be limited by the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Operation	Process Weight (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)	PM Emission Limitation Pursuant to CP 049-8548 (pounds per hour)
Scrap & charge handling	10.0 24.0	19.2 34.5	1.07, total	0.53 for the 10 TPH
Three (3) electric induction melting furnaces	13.0, total	22.9, total	1.36, total	1.43
Pouring & cooling	10.3	19.6	0.622	
Shakeout & casting/cooling	10.3	19.6	5.55	

Grinding and finishing	8.34	17.0	0.130	
------------------------	------	------	-------	--

326 IAC 8 (Volatile Organic Compound Rules)

Since the potential VOC emissions from pouring, cooling and shakeout of 6.62 tons per year are less than twenty-five (25) tons per year, no article 8 rules apply to this modification.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This modification will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to the Clean Air Act.
- (b) See attached spreadsheets for detailed air toxic calculations on page 4 of 4.

Conclusion

The construction of the three (3) ton per hour melt capacity increase at an existing permitted gray and ductile iron foundry will be subject to the conditions of the attached proposed **Construction Permit No. CP 049-9997-00002**.

**Indiana Department of Environmental Management
Office of Air Management**

Addendum to the
Technical Support Document for New Construction and Operation

Source Name: Rochester Metal Products Corporation
Source Location: 616 Indiana Avenue, Rochester, Indiana 46975
County: Fulton
Construction Permit No.: CP 049-9997-00002
SIC Code: 3321
Permit Reviewer: Mark L. Kramer

On January 26, 1999, the Office of Air Management (OAM) had a notice published in the Rochester Sentinel, Rochester, Indiana, stating that Rochester Metal Products Corporation had applied for a construction permit to construct and operate an increase of three (3) tons per hour melt capacity at an existing permitted gray and ductile iron foundry with baghouse dust collectors as air pollution control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 24, Douglas Smith, Project Engineer, Rochester Metal Products Corporation, submitted comments on the proposed construction permit. The summary of the comments and corresponding responses are as follows. Permit language which is deleted appears as ~~strikeouts~~ and new language is **bolded**.

Comment 1:

Regarding Operation Condition 10(b), the stated 0.53 lbs/hr PM and PM₁₀ emissions limit should not be applied to the handling and charge process associated with the Hunter operations. This emission limit was established in CP 049-8548 (issued 10/17/97) for the handling and charge associated with the Disa phase 2 systems. Although this is a valid limit that is not superseded and that we are responsible for, it was not intended to be associated with nor should be applied to the Hunter operations. We therefore request that Operation Condition 10(b) be deleted from this construction permit.

Response 1:

Since the previous permit had the 0.53 pounds per hour PM and PM₁₀ limits to avoid the applicability of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the existing limit must still be met since the emissions from the old and proposed equipment vent through the baghouse DC-9. Therefore, Condition 10(b) has not been removed.

Comments 2 and 3:

Regarding Operation Conditions 11(a) and 12, these two conditions appear to be designed to meet the same objective of providing a system to ensure continuing compliance with the particulate emissions standards by ensuring proper operation of the baghouse. As such we believe that meeting both conditions is duplicative and therefore presents an unreasonable compliance cost.

We would request that Operating Condition 12 be removed and that Condition 11(a) be retained.

We do not believe that pressure drop readings every shift would provide any information beyond that which daily pressure drop readings would provide. We have experienced very reliable baghouse operation that we attribute to good maintenance practices. Therefore we request that daily pressure drop readings replace the every shift readings indicated.

Responses 2 and 3:

Visible emissions notations are used to indicate compliance with 326 IAC 5-1 Opacity Limitations without the requirement to have a person on site trained in opacity measurements. This requirement is designed as a trigger that the source perform some corrective action on the facility if visible emissions are abnormal, to ensure continuous compliance with opacity limitations.

Condition 11(a) has been revised as follows to require daily pressure drop readings rather than readings every shift:

- (a) The Permittee shall take readings of the total static pressure drop across the baghouses, at least once ~~per shift~~ **daily**. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across baghouses known as DC2, DC4, DC5, DC9 and DC13 shall be maintained within the range of 3 and 6 inches of water. The Preventive Maintenance Plan for these baghouses shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.

Comment 4:

Regarding Operation Condition 11(b), we have not seen evidence that semiannual pressure gauge calibration is necessary and believe that annual calibration would be more than adequate. We have provided a letter from Dwyer, our gauge supplier, stating that an annual calibration frequency is recommended. Dwyer recommends a semiannual calibration frequency for critical applications, such as nuclear power plants. A revision from semiannual to annual calibration was requested and granted for our previous construction permit, CP 049-8548. We request that our permit indicate an annual calibration frequency.

Response 4:

The requirement to calibrate the pressure gauge at least once every six (6) months is not a onerous requirement, since if the gauge does go out of calibration, non-compliance could exist for time periods approaching one (1) year.

Comment 5:

Regarding Operation Condition 11(d), we do not believe that baghouse inspection schedules belong in permit operation conditions. These inspection schedules are a preventive maintenance concern that is best dealt with in a Preventive Maintenance Plan (PMP). The Title V permitting rules require that we maintain PMP's, and we will include appropriate preventive maintenance schedules and maintenance records for our baghouses in those PMP's.

We have experienced very reliable baghouse operation that we attribute to existing good preventive maintenance practices. Therefore, we request that the requirement to quarterly inspect our baghouses and the associated record keeping requirements be removed from the permit conditions.

Response 5:

Although the PMP may incorporate these inspections, this condition requires routine inspections of the baghouses once per quarter. Therefore, this condition has not been deleted.

Comment 6:

Regarding Operation Condition 15 requiring submission of Emergency Reduction Plans, we do not believe that changes to our existing Plan are necessary. Rochester's facility is located in Fulton County, an area which has been designated as attainment or unclassifiable for all of these ambient air quality standards. Historic ambient monitoring data indicate that the alert and warning levels have never been approached, and due to the fact that exceedances of the alert and warning levels are very unlikely, Rochester has therefore not developed additional Plans for these modifications. Rochester would seek to curtail production in the event the alert or warning levels are exceeded and would develop more detailed plans if the area were to be designated as non-attainment. Therefore, to fulfill the requirements of condition 15, we are resubmitting our existing Emergency Reduction Plan, as submitted with the Title V application, as an attachment to these comments.

Response 6:

Condition 15 has been revised to reflect the fact that the Emergency Reduction Plan has been submitted as follows:

Emergency Reduction Plans

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee ~~shall~~ prepared **and submitted** written emergency reduction plans (ERPs) consistent with safe operating procedures **on May 31, 1996**.

~~(b) These ERPs shall be submitted for approval to:~~

~~Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015~~

~~within 180 calendar days from the issuance date of this permit.~~

~~(b)~~ If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.

~~(c)~~ These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

- ~~(e)~~(d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- ~~(f)~~(e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Comment 7:

Regarding Operation Condition 16, we believe that emission factor specifications for our operation should be made for "pouring and mold cooling", not "pouring and cooling". We request that this revision be made.

Response 7:

Condition 16 has been revised as suggested as follows:

Verification of PM Emission Factor for Pouring and **Mold** Cooling

16. Pursuant to CP 049-8548-00002 issued on October 7, 1997, testing of the pouring and **mold** cooling operations for PM and PM₁₀ emissions shall be performed within 180 days of the submittal of the Affidavit of Construction for CP 049-8548-00002 and results shall verify that the PM and PM₁₀ emission factors for pouring and **mold** cooling do not exceed 1.286 pounds per ton of metal for PM and 0.0697 pounds per ton of metal for PM₁₀ in order that 326 IAC 2-2 is not applicable to this modification, ~~or~~.

Comments 8 and 9:

Regarding the emissions summary table on page 6 of the TSD, the values shown in the columns labeled with the units "pounds per hour" are actually tons per year amounts. We request that the pounds per hour units be revised to indicate tons per year.

Regarding the emissions summary table on page 6 of the TSD, the "Allowable PM Emission Rate" should be based on the total weight of all materials introduced into the process. For our process, this would include metal and sand. The total process weight rate would be 10.3 tons/hr of metal plus 66 tons/hr of sand, a total of 76.3 tons/hr total weight. The allowable emission rate for pouring/mold cooling and shakeout/casting cooling would therefore be 48.6 lbs/hr, following the formula ($E = 55 P^{0.11} - 40$) for rates greater than 30 tons/hr.

Responses 8 and 9:

The fourth column of the following TSD table should have had the units as tons per year, not pounds per hour. The process weight rates have been adjusted to include the 66.0 tons per hour of sand with the 10.3 tons of metal. The allowable PM emission rates for the pouring and mold cooling and the shakeout and casting/cooling operations have been revised as follows. No changes in permit conditions are required.

Operation	Process Weight (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour) (tons per year)	PM Emission Limitation Pursuant to CP 049-8548 (pounds per hour)
Scrap & charge handling	10.0 24.0	19.2 34.5	1.07, total	0.53 for the 10 TPH
Three (3) electric induction melting furnaces	13.0, total	22.9, total	1.36, total	1.43
Pouring & Mold cooling	40.3 76.3	49.6 48.6	0.622	
Shakeout & casting/cooling	40.3 76.3	49.6 48.6	5.55	
Grinding and finishing	8.34	17.0	0.130	

**Appendix A: Emission Calculations
Grey Iron Foundry**

Company Name: Rochester Metal Products Corporation
Address City IN Zip: 616 Indiana Avenue, Rochester, IN 46975
CP: 049-9997
Plt ID: 049-00002
Reviewer: Mark Kramer
Date: August 4, 1998

Throughputs are increases in existing capacities
 Process weights are totals for the facilities

Iron Process	Throughput tons/hr	Total Process Weight tons/hr	PM Control
Charge Handling	3.00	34.0	86.4%

SCC 3-04-003-15

	PM	PM10	Allowable PM 326 IAC 6-3-2
Emission Factors lbs/ton produced	0.6	0.36	
Percentage of Emissions	100.00%	100.00%	
Potential Emissions lbs/hr	1.80	1.08	41.1
Potential Emissions lbs/day	43.2	25.9	
Potential Emissions tons/yr	7.88	4.73	
Potential Emissions after Controls tons/yr	1.07	0.643	

Iron Process	Throughput tons/hr	Total Process Weight tons/hr	PM Control
3 Electric Induction Melting Furnaces	3.00	13.0	88.5%

SCC 3-04-003-03

	PM	PM10	Allowable PM 326 IAC 6-3-2
Emission Factors lbs/ton produced	0.9	0.86	
Percentage of Emissions	100.00%	100.00%	
Potential Emissions lbs/hr	2.70	2.58	22.9
Potential Emissions tons/yr	11.8	11.3	
Potential Emissions after Controls tons/yr	1.36	1.30	

Iron Process	Throughput tons/hr	Total Process Weight tons/hr	PM Control
Pouring & Cooling	3.0	10.3	0.0%
SCC 3-04-003-18			
	PM	PM10	Allowable PM
Emission Factors lbs/ton produced	0.0473	0.0473	326 IAC 6-3-2
Percentage of Emissions	100.00%	100.00%	
Potential Emissions lbs/hr	0.142	0.142	19.6
Potential Emissions tons/yr	0.622	0.622	
Potential Emissions after Controls tons/yr	0.622	0.622	

PM and PM-10 are stack test emission factors

Iron Process	Throughput tons/hr	Total Process Weight tons/hr	PM Control
Shakeout & Casting/Cooling Operations	3.00	10.3	86.8%
SCC-3-04-003-31			
	PM	PM10	Allowable PM
Emission Factors lbs/ton produced	3.2	2.24	326 IAC 6-3-2
Percentage of Emissions	100.00%	100.00%	
Potential Emissions lbs/hr	9.60	6.72	19.6
Potential Emissions tons/yr	42.0	29.4	
Potential Emissions after Controls tons/yr	5.550	3.885	

Iron Process	Throughput tons/hr	Total Process Weight tons/hr	PM Control
Grinding and Cleaning	1.74	8.34	99.9%
SCC 3-04-003-40			
	PM	PM10	Allowable PM
Emission Factors lbs/ton produced	17	1.7	326 IAC 6-3-2
Percentage of Emissions	100.00%	100.00%	
Potential Emissions lbs/hr	29.6	2.96	17.0
Potential Emissions tons/yr	129.6	13.0	
Potential Emissions after Controls tons/yr	0.130	0.013	

Iron Process VOC From Cores	Throughput tons/hr 3.0	VOC Control	0.0%
-----------------------------------	------------------------------	-------------	------

	VOC
Emission Factors lbs/ton produced	0.504
Percentage of Emissions	100.00%
Potential Emissions lbs/hr	1.512
Potential Emissions tons/yr	6.62
Potential Emissions after Controls tons/yr	6.62

SUMMARY OF EMISSIONS

Process Description	Before/After Control	PM (tpy)	PM10 (tpy)	VOC (tpy)
Iron Charge Handling	Before	7.88	4.73	
	After	1.07	0.64	
Iron 3 Electric Induction Melting Furnaces	Before	11.83	11.30	
	After	1.36	1.30	
Iron Pouring & Cooling	Before	0.622	0.622	
	After	0.622	0.622	
Iron Shakeout & Casting/Cooling Operations	Before	42.0	29.4	
	After	5.550	3.885	
Iron Grinding and Cleaning	Before	130	13.0	
	After	0.13	0.013	
Iron VOC From Cores	Before			6.62
	After			6.62
TOTALS	Before	192	59.0	6.62
	After	8.73	6.46	6.62

Iron
 Process
 Electric Induction Melting Furnaces

Throughput
 tons/hr
 3.00

PM Control 88.5%

SCC 3-04-003-03	Lead
Emission Factors lbs/ton produced	0.0425
Percentage of Emissions	100.00%
Potential Emissions lbs/hr	0.13
Potential Emissions tons/yr	0.558
Potential Emissions after Controls tons/yr	0.064