INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: Feb. 1, 2010

RE: Rochester Metal Products Corp / 049-24381-00002

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot12/03/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mr. Andrew Murdock
Rochester Metal Products Corporation
616 Indiana Avenue
Rochester, IN 46975

Feb. 1, 2010

Re: 049-24381-00002
Significant Source Modification to
Part 70 Operating Permit No.: T 049-5999-00002

Dear Mr. Murdock:

Rochester Metal Products Corporation was issued Part 70 Operating Permit No. T 049-5999-00002 on December 22, 2006, for a gray and ductile iron foundry. An application to modify the source was received on February 28, 2007. Pursuant to 326 IAC 2-7-10.5(f)(1), a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

The draft significant source modification does not contain any new equipment that would emit air pollutants. The modification has been approved to fulfill the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) that apply to the Disa 1 and Disa 2 processes including the melt operations for PM, PM_{10} and CO emissions.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in modification which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to modify 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.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if modification is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units modified under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes modification of the emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Kimberly Cottrell, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kimberly Cottrell or extension (3-0870), or dial (317) 233-0870.

Sincerely,

Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Attachments:
Updated Permit
Technical Support Document
PTE Calculations

klc

cc: File – Fulton County
Fulton County Health Department
U.S. EPA, Region V
Northern Regional Office
Compliance and Enforcement Branch

Greg Loving
Rochester Metal Products Corporation
616 Indiana Avenue
Rochester, IN 46975

Tom Rarick
ERM
11350 North Meridian, Suite 220
Indianapolis, IN 46032

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PSD / SIGNIFICANT SOURCE MODIFICATION to a PART 70 SOURCE

OFFICE OF AIR QUALITY

Rochester Metal Products Corp.
616 Indiana Avenue
Rochester, Indiana 46975

(herein known as the Permittee) is hereby authorized to construct subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit addresses certain new source review requirements for new and existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5 and 326 IAC 2-2, applicable to those conditions.

2nd Significant Source Modification No.: 049-24381-00002	
Issued by: Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: Feb. 1, 2010

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Attachment A: National Emission Standards for Hazardous Air Pollutants Iron and Steel Foundries Requirements [326 IAC 20-92-1] [40 CFR Part 63, Subpart EEEEE]

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary gray and ductile iron foundry.

Source Address:	616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address:	P.O. Box 488, Rochester, Indiana 46975
General Source Phone Number:	574-223-3164
SIC Code:	3321
County Location:	Fulton
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

Melt Operations, consisting of the following:

(a) Two (2) natural gas-fired preheaters (No. 1 and No. 2) and a charge handling system, identified as EU-118, modified in 1996, No. 2 preheater approved for construction in 2007, controlled by baghouse DC-9, rated at 7 and 14 million British thermal units per hour for No. 1 and No. 2 preheaters, respectively, exhausted to Stack DC-9, preheater capacities: 13 and 21 tons of metal, respectively, charge system capacity: 34 tons of metal per hour total.

(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.

(c) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3, 3, and 7 tons of metal per hour, respectively, 13 tons of metal per hour total.

Hunter Casting Processes, consisting of the following:

(d) One (1) Hunter sand system, identified as EU-311, commenced construction in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(e) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979 and modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(f) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

(g) One (1) Hunter casting cooling process, identified as EU-315, commenced construction in 1979, controlled by baghouse DC-2, exhausted internally, nominal capacity: 8.34 tons of metal per hour.

(h) One (1) Hunter face sand muller, identified as EU-316, constructed in 1983, emissions uncontrolled and unvented, capacity: 1 ton of sand per hour.

(i) One (1) Hunter shotblast process, identified as EU-410, consisting of two (2) shotblast units, constructed in 1979 and modified in 1996, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(j) One (1) Hunter grinding process, identified as EU-412, consisting of various stationary and hand-held grinding units, constructed in 1979 and modified in 1995, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

Hunter Storage Silos

(k) One (1) Hunter core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54 tons of core sand.

(l) One (1) Hunter sand storage silo, identified as EU-203, constructed in 1980, controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

(m) One (1) Hunter bond storage silo, identified as EU-204, constructed in 1980, controlled by a bin vent filter, capacity: 10 tons of bond per hour

Disa 1 Processes, consisting of the following:

(n) One (1) Disa 1/Disa 2 sand system, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 60 tons of sand per hour.

(o)(1) Prior to construction of Stack D-333C:
One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(o)(2) After construction of Stack D-333C:
One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(p) One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled by baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(q) One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6, exhausted to Stack DC-6/7, and DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(r) One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(s) One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

Disa 2 Processes, consisting of the following:

(t) One (1) Disa 2 sand muller, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 60 tons of sand per hour.

(u)(1) Prior to construction of Stack D-333C:
One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(u)(2) After construction of Stack D-333C:
One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(v) One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(w) One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(x) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(y) One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

Disa Storage Silos

(z) One (1) Disa core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30 tons of core sand and 0.85 tons of core sand per hour.

(aa) One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, constructed in 1996, controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.

(bb) One (1) Disa New Sand Day Bin, identified as EU-DNS, constructed in 1996, controlled by a bin vent, internally vented, capacity: 10 tons of sand and 66 tons of sand per hour.

Magnesium Treatment System

(cc) One (1) Hunter magnesium treatment system, identified as EU-120, permitted in 2009, controlled by baghouse DC-10, exhausted internally, nominal capacity: 10.3 tons of metal per hour.

(dd) One (1) Disa magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.

Phenolic Urethane Cold Box Core Production System, consisting of the following:

(ee) Six (6) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2 pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:

(1) EU-212a, constructed in 1989, served by mixer A, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(2) EU-212b, constructed in 1991, served by mixer B, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(3) EU-212c, constructed in 1993, served by mixer C, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(4) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(5) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(6) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.

(ff) One (1) core wash operation (dip tank), identified as EU-503, constructed in 1972, emissions uncontrolled, nominal capacity: 2.8 tons of core per hour and 5.7 pounds of core wash per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour rated at a total of 32.13 million British thermal units per hour consisting of: [326 IAC 2-2]

(1) One (1) Hunter finishing make-up air unit, constructed in 1982, rated at 4.85 million British thermal units per hour.

(2) One (1) Hunter molding make-up air unit, constructed in 1989, rated at 5.41 million British thermal units per hour.

(3) Three (3) Disa make-up air units #1, #2 and #3, all constructed in 1996, rated at 4.0 million British thermal units per hour each.

(4) One (1) Disa make-up air unit #4, constructed in 1999, rated at 6.0 million British thermal units per hour.

(5) Six (6) shell core machines, identified as HS-16-RA, constructed in 1988, rated at 1.18 million British thermal units per hour total.

(6) Two (2) shell core machines, identified as HS-CB-22-RA, constructed in 1988, rated at 0.74 million British thermal units per hour total.

(7) Three (3) shell core machines, identified as HP-43-A, constructed in 1988, rated at 0.45 million British thermal units per hour total.

(8) HVAC units, consisting of five (2) units in the pattern shop, main office (2) locker room and Disa lab, constructed in 1992, 1995 (2), 1996 and 2000, rated at 0.20, 0.10, 0.06, 0.75 and 0.09 million British thermal units per hour, respectively.

(9) Eight (8) melt area ladle repair torches, rated at 0.30 million British thermal units per hour total, constructed in 1996.

(b) One (1) electric induction holding furnace, identified as EU-113, constructed in 1996 [326 IAC 6-3-2].

(c) One (1) pattern shop operation, equipped with a baghouse at 2,000 cubic feet per minute and 0.03 grains per dry standard cubic feet, constructed in 1997 [326 IAC 6-3-2].

(d) One (1) Hunter sample shotblast operation, equipped with a baghouse at 1,500 cubic feet per minute and 0.03 grains per dry standard cubic feet constructed in 2001 [326 IAC 6-3-2].

(e) One (1) dry ice blast operation, equipped with a 2,000 cubic feet per minute blower attached to a filter, exhausted internally, constructed in 2003 [326 IAC 6-3-2].

(f) One (1) Disa sample shotblast operation, equipped with a 1,000 cubic feet per minute baghouse, deemed an insignificant activity, constructed in 1996 [326 IAC 6-3-2].

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) The Part 70 Operating permit, T 049-5999-00002, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Northern Regional Office, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T 049-5999-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

(a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

(b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), 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.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ, 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 episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit, exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50, IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Facilities Constructed Prior to 1996

(d) One (1) Hunter sand system, identified as EU-311, commenced construction in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(e) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979 and modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(f) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

(g) One (1) Hunter casting cooling process, identified as EU-315, commenced construction in 1979, controlled by baghouse DC-2, exhausted internally, nominal capacity: 8.34 tons of metal per hour.

(h) One (1) Hunter face sand muller, identified as EU-316, constructed in 1983, emissions uncontrolled and unvented, capacity: 1 ton of sand per hour.

(i) One (1) Hunter shotblast process, identified as EU-410, consisting of two (2) shotblast units, constructed in 1979 and modified in 1996, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(j) One (1) Hunter grinding process, identified as EU-412, consisting of various stationary and hand-held grinding units, constructed in 1979 and modified in 1995, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(k) One (1) Hunter core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54 tons of core sand.

(l) One (1) Hunter sand storage silo, identified as EU-203, constructed in 1980, controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

(m) One (1) Hunter bond storage silo, identified as EU-204, constructed in 1980, controlled by a bin vent filter, capacity: 10 tons of bond per hour

(ee) Six (6) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2 pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:

(1) EU-212a, constructed in 1989, served by mixer A, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(2) EU-212b, constructed in 1991, served by mixer B, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(3) EU-212c, constructed in 1993, served by mixer C, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(4) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(5) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(6) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.

(ff) One (1) core wash operation (dip tank), identified as EU-503, constructed in 1972, emissions uncontrolled, nominal capacity: 2.8 tons of core per hour and 5.7 pounds of core wash per hour.

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour rated at a total of 32.13 million British thermal units per hour consisting of: [326 IAC 2-2]

(1) One (1) Hunter finishing make-up air unit, constructed in 1982, rated at 4.85 million British thermal units per hour.

(2) One (1) Hunter molding make-up air unit, constructed in 1989, rated at 5.41 million British thermal units per hour.

(3) Six (6) shell core machines, identified as HS-16-RA, constructed in 1988, rated at 1.18 million British thermal units per hour total.

(4) Two (2) shell core machines, identified as HS-CB-22-RA, constructed in 1988, rated at 0.74 million British thermal units per hour total.

(5) Three (3) shell core machines, identified as HP-43-A, constructed in 1988, rated at 0.45 million British thermal units per hour total.

(6) HVAC units, constructed in 1992, and 1995 (2), rated at 0.20, 0.10, and 0.06, million British thermal units per hour, respectively.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Emission Limitations for Construction Completed Prior to 1996 [326 IAC 2-2]

The total PM, $PM_{10,}$ VOC and CO emissions from the facilities listed in this section, all constructed prior to 1996, shall each be limited to less than one hundred (100) tons per year. Compliance with these emission limits shall be demonstrated by complying with the throughput and emission limits specified in Sections D.2, D.3, D.7 and D.9. Compliance makes the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities listed in this section.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Melt Operations & Natural Gas Combustion

Melt Operations

(a) Two (2) natural gas-fired preheaters (No. 1 and No. 2) and a charge handling system, identified as EU-118, modified in 1996, No. 2 preheater approved for construction in 2007, controlled by baghouse DC-9, rated at 7 and 14 million British thermal units per hour for No. 1 and No. 2 preheaters, respectively, exhausted to Stack DC-9, preheater capacities: 13 and 21 tons of metal, respectively, charge system capacity: 34 tons of metal per hour total.

(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.

(c) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3, 3, and 7 tons of metal per hour, respectively, 13 tons of metal per hour total.

Insignificant Activities: Natural Gas Combustion

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour rated at a total of 32.13 million British thermal units per hour consisting of: [326 IAC 2-2]

(1) One (1) Hunter finishing make-up air unit, constructed in 1982, rated at 4.85 million British thermal units per hour.

(2) One (1) Hunter molding make-up air unit, constructed in 1989, rated at 5.41 million British thermal units per hour.

(3) Three (3) Disa make-up air units #1, #2 and #3, all constructed in 1996, rated at 4.0 million British thermal units per hour each.

(4) One (1) Disa make-up air unit #4, constructed in 1999, rated at 6.0 million British thermal units per hour.

(5) Six (6) shell core machines, identified as HS-16-RA, constructed in 1988, rated at 1.18 million British thermal units per hour total.

(6) Two (2) shell core machines, identified as HS-CB-22-RA, constructed in 1988, rated at 0.74 million British thermal units per hour total.

(7) Three (3) shell core machines, identified as HP-43-A, constructed in 1988, rated at 0.45 million British thermal units per hour total.

(8) HVAC units, consisting of five (2) units in the pattern shop, main office (2) locker room and Disa lab, constructed in 1992, 1995 (2), 1996 and 2000, rated at 0.20, 0.10, 0.06, 0.75 and 0.09 million British thermal units per hour, respectively.

(9) Eight (8) melt area ladle repair torches, rated at 0.30 million British thermal units per hour total, constructed in 1996.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 CO and VOC PSD Minor Limits [326 IAC 2-2]

(a) The total natural gas usage for the entire source shall not exceed 150 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) CO emissions shall not exceed 84 pounds per million cubic feet of natural gas.

(c) VOC emissions shall not exceed 5.5 pounds per million cubic feet of natural gas.

(d) Compliance with the limits in (a) and (b) above combined with the limits in Condition D.3.3 will limit the CO emissions from all facilities constructed prior to 1996 to less that one hundred (100) tons per year and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996 for CO.

(e) Compliance with the limits in (a) and (c) above combined with the limits in Conditions D.4.1, D.5.1 and D.6.1 will limit the VOC emissions from Disa 1 and Disa 2 to less that forty (40) tons per year and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.2.2 PM and PM_{10} PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the baghouse DC-9 controlling emissions from the natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.98 pound per hour.

(b) PM_{10} emissions from the baghouse DC-9 controlling emissions from the natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 1.0 pound per hour.

(c) PM emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.7 pound per hour.

(d) PM_{10} emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.7 pound per hour.

D.2.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pounds per hour limitation calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Device - Stack # Emission Units	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
Baghouse DC-9 - DC-9		
EU-114	10.5	19.8
EU-115	10.5	19.8
EU-118		
Preheater No. 1	13	22.9
Preheater No. 2	21	31.5
		Total 94.0
Baghouse DC-13 - DC-13		
EU-131	3	8.56
EU-132	3	8.56
EU-133	7	15.1
		Total 32.2

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-9 and DC-13, and the natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), the electric induction furnaces 4 and 5 (EU-114 and EU-115), the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133).

Compliance Determination Requirements

D.2.5 Particulate Control [326 IAC 2-7-6(6)] [326 IAC 2-2]

(a) Baghouse DC-9 for particulate control shall be in operation and control emissions from the natural-gas fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the electric induction furnaces (EU-114 and EU-115) at all times that these processes are in operation.

(b) Baghouse DC-13 for particulate control shall be in operation and control emissions from the Hunter electric induction furnaces (EU-131, EU-132 and EU-133) at all times that these processes are in operation.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing for the natural-gas fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the electric induction furnaces (EU-114 and EU-115), all controlled by baghouse DC-9.

(b) In order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing for the Hunter electric induction furnaces (EU-131, EU-132 and EU-133) controlled by baghouse DC-13.

(c) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.7 Record Keeping Requirements

(a) To document compliance with Condition D.2.1(a), the Permittee shall maintain records of the natural gas usage for the entire source on a monthly basis.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.2.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Hunter Casting Processes

(d) One (1) Hunter sand system, identified as EU-311, constructed in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(e) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979, modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(f) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

(g) One (1) Hunter casting cooling process, identified as EU-315, commenced construction in 1979, controlled by baghouse DC-2, exhausted internally, nominal capacity: 8.34 tons of metal per hour.

(h) One (1) Hunter face sand muller, identified as EU-316, constructed in 1983, emissions uncontrolled and unvented, capacity: 1 ton of sand per hour.

(i) One (1) Hunter shotblast process, identified as EU-410, consisting of two (2) shotblast units, constructed in 1979 and modified in 1996, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(j) One (1) Hunter grinding process, identified as EU-412, consisting of various stationary and hand-held grinding units, constructed in 1979 and modified in 1995, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(k) One (1) Hunter core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54 tons of core sand.

(l) One (1) Hunter sand storage silo, identified as EU-203, constructed in 1980, controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter pouring cooling process (EU-313), the Hunter casting cooling process (EU-315), the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) shall each not exceed 45,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The amount of sand processed by the Hunter face sand muller (EU-316) shall not exceed 500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The Hunter sand system (EU-311), the Hunter shakeout process (EU-314), the core sand storage silo (EU-200), and the Hunter sand storage silo (EU-203), shall each not exceed 6,500 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) Stack DC-2 emissions from the Hunter casting cooling process (EU-315) shall not exceed:

(1) 0.3 pounds of PM per ton of metal throughput, and

(2) 0.3 pounds of PM_{10} per ton of metal throughput.

(e) Stack DC-3 emissions from the Hunter sand system (EU-311), the Hunter sand storage silo (EU-203) and the core sand storage silo (EU-200) shall not exceed:

(1) 3.0 pounds of PM per hour, and

(2) 3.0 pounds of PM_{10} per hour.

(f) Stack DC-4 emissions from the Hunter sand system (EU-311) and the Hunter shakeout process (EU-314) shall not exceed:

(1) 7.0 pounds of PM per hour, and

(2) 8.0 pounds of PM_{10} per hour.

(g) Stack DC-5 emissions from the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) shall not exceed:

(1) 0.23 pounds of PM per ton of metal throughput, and

(2) 0.23 pounds of PM_{10} per ton of metal throughput.

(h) Stacks HP1 - HP4 emissions from the Hunter pouring cooling process (EU-313) shall not exceed:

(1) 0.7 pounds of PM per ton of metal throughput, and

(2) 0.7 pounds of PM_{10} per ton of metal throughput.

(i) Emissions from the Hunter face sand muller (EU-316) shall not exceed 3.6 pounds of PM per ton of sand and 0.54 pounds of PM_{10} per ton of sand.

Compliance with the limits in paragraphs (a) through (i) above combined with the limits in Condition D.9.1 shall limit the potential to emit PM and PM_{10} from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of PM and PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.3.2 PM_{10} PSD Limitations [326 IAC 2-2-4]

The following limits shall apply pursuant to 326 IAC 2-2-4 as a result of the air dispersion modeling analysis performed for SSM 049-24381-00002:

(a) PM_{10} emissions from each of the baghouses DC-3 and DC-4 controlling emissions from the Hunter sand system (EU-311) shall not 1.0 pound per hour.

(b) PM_{10} emissions from each of the Stacks HP1, HP2, HP3 and HP4 associated with the Hunter pouring cooling process (EU-313) shall not 1.4 pound per hour.

D.3.3 CO PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall each not exceed 45,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total CO emissions from the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall not exceed 4.15 pounds of per ton of metal throughput.

Compliance with these limits combined with the limits in Condition D.2.1 shall limit the potential to emit CO from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of CO, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.3.4 VOC BACT Minor Limit [326 IAC 2-2]

(a) The total throughput of metal to the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall be less than 45,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The throughput of metal to Hunter Line No. 4 of the Hunter pouring cooling process (EU-313) shall be less than 36,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total VOC emissions from the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall not exceed 1.34 pounds per ton of metal.

Compliance with the limits in paragraphs (a) through (c) above combined with the limits in Conditions D.2.1 and D.7.1 shall limit the potential to emit VOC from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.3.5 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pounds per hour limitation calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Devices - Stack # **Emission Units**	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
None - HP1, HP2, HP3 and HP4 EU-313	110.3	52.3
None - None EU-316	1	4.1
Baghouse DC-2 - DC-2 EU-315	8.34	17
Baghouse DC-3 - DC-3 EU-200 EU-203 EU-311	10 10 100	19.2 19.2 51.3 Total 89.7
Baghouse DC-4 - DC-4 EU-311 EU-314	100 110.3	51.3 52.3 Total 103.6
Baghouse DC-5 - DC-5 EU-410 EU-412	8.34 8.34	17 17 Total 34

D.3.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-2, DC-3, DC-4, DC-5, and the core sand silo (EU-200), the Hunter sand storage silo (EU-203), the Hunter sand system (EU-311), and the Hunter shakeout process (EU-314).

Compliance Determination Requirements

D.3.7 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions D.3.1(d) and D.3.5, baghouse DC-2 for particulate control shall be in operation and control emissions from the Hunter casting cooling process (EU-315) at all times that this Hunter process is in operation.

(b) In order to comply with Conditions D.3.1(e) and D.3.5, baghouse DC-3 for particulate control shall be in operation and control emissions from the core sand storage silo (EU-200), the Hunter sand storage silo (EU-203), and the Hunter sand system (EU-311) at all times that these Hunter processes are in operation.

(c) In order to comply with Conditions D.3.1(f) and D.3.5, baghouse DC-4 for particulate control shall be in operation and control emissions from the Hunter sand system (EU-311), and the Hunter shakeout process (EU-314) at all times that these Hunter processes are in operation.

(d) In order to comply with Conditions D.3.1(g) and D.3.5, baghouse DC-5 for particulate control shall be in operation and control emissions from the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) at all times that these Hunter processes are in operation.

(e) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.3.1(d), (e), (f), (g), and (h), D.3,2(a) and (b), and D.3.5, the Permittee shall perform PM and PM_{10} testing for:

(1) The Hunter casting cooling process (EU-315) controlled by baghouse DC-2.

(2) The Hunter sand system (EU-311), the core sand silo (EU-200), and the Hunter sand storage silo (EU-203) controlled by baghouse DC-3.

(3) The Hunter sand system (EU-311) and the Hunter shakeout process (EU-314) controlled by baghouse DC-4.

(4) The Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) controlled by baghouse DC-5.

PM_{10} includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions D.3.4(c), the Permittee shall perform VOC testing for the Hunter pouring cooling process (EU-313), Line No. 4 of the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314).

(c) In order to demonstrate compliance with Condition D.3.3(b), the Permittee shall perform CO testing for the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314).

(d) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.9 Visible Emissions Notations

(a) Visible emission notations

(1) Visible emissions notations of the Hunter casting cooling (EU-315) associated with baghouse DC-2 shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

(2) Visible emission notations of the core sand storage silo (EU-200), the Hunter sand storage silo (EU-203) and the Hunter sand system (EU-311), Stack exhaust DC-3 shall be performed at least once per day during normal daylight operations.

(3) Visible emission notations of the Hunter sand system (EU-311) and the Hunter shakeout process (EU-314) Stack exhaust DC-4 shall be performed at least once per day during normal daylight operations.

(4) Visible emissions notations of the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) associated with baghouse DC-5 shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) 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 visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.3.10 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouse DC-2 used in conjunction with the Hunter casting cooling process (EU-315) at least once per day when this process is in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the baghouse DC-3 used in conjunction with the core sand storage silo (EU-200), the Hunter sand system (EU-311), and the Hunter sand storage silo (EU-203) at least once per day when any of these processes are in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The Permittee shall record the pressure drop across the baghouse DC-4 used in conjunction with the Hunter sand system (EU-311) and the Hunter shakeout system (EU-314) at least once per day when either of these processes is in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(d) The Permittee shall record the pressure drop across the baghouse DC-5 used in conjunction with the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) at least once per day when either of these processes is in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(e) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.11 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.12 Record Keeping Requirements

(a) To document compliance with Conditions D.3.1(a), D.3.2(a), D.3.4(a), and D.3.4(b), the Permittee shall maintain records of the throughput of metal to the Hunter pouring cooling process (EU-313), the Hunter casting cooling process (EU-315), the Hunter shakeout process (EU-314), the Hunter shotblast process (EU-410), and the Hunter grinding process (EU-412) on a monthly basis.

(b) To document compliance with Condition D.3.1(b), the Permittee shall maintain records of the throughput of sand to the Hunter face sand muller (EU-316) on a monthly basis.

(c) To document compliance with Condition D.3.1(c), the Permittee shall maintain records of the number of hours of operation of the core sand storage silo (EU-200), the Hunter sand storage silo (EU-203), the Hunter sand system (EU-311), and the Hunter shakeout process (EU-314) on a monthly basis.

(d) To document compliance with Condition D.3.9(a)(2) and (3), the Permittee shall maintain records of visible emission notations of Stack exhausts DC-3 and DC-4 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(e) To document compliance with Condition (b) D.3.9(a)(1) and (4), the Permittee shall maintain records of visible emission notations of the Hunter casting cooling (EU-315), associated with baghouseDC-2, and the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412), associated with baghouseDC-5, once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not exhaust to the atmosphere).

(f) To document compliance with Condition D.3.10(b) and (c), the Permittee shall maintain records once per day of the pressure drop for baghouses DC-3 and DC-4 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(g) To document compliance with Condition D.3.10(a) and (d), the Permittee shall maintain records once per day of the pressure drop for baghouses DC-2 and DC-5 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

(h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.3.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.1(a), (b) and (c), D.3.3(a), D.3.4(a) and D.3.4(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Disa 1 and Disa 2 Pouring and Cooling Processes

Prior to construction of Stack D-333C:

(o)(1) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(u)(1) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

After construction of Stack D-333C:

(o)(2) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, constructed in 2010, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(u)(2) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, constructed in 2010, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 VOC BACT and PSD Minor Limits [326 IAC 8-1-6] [326 IAC 2-2]

(a) The throughput of metal to the Disa 1 pouring and cooling process (EU-323) shall be limited to less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The amount of metal processed by the Disa 2 pouring and cooling process (EU-333) shall be less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total VOC emissions shall not exceed 0.80 pound per ton of metal from the Disa 1 pouring and cooling process (EU-323) and the Disa 1 casting shakeout process (EU-324) in Section D.5.

(d) The total VOC emissions shall not exceed 0.80 pound per ton of metal throughput from the Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334) in Section D.6.

(e) The total throughput of metal to the Disa 1 pouring and cooling process (EU-323), the Disa 1 casting shakeout process (EU-324) in Section D.5, the Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334) in Section D.6 shall be limited to less than 84,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) Compliance with (a) and (c) above combined with the limits in Conditions D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 1 process.

(g) Compliance with (b) and (d) above combined with the limits in Conditions D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 2 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 2 process.

(h) Compliance with (a), (b), and (c) above combined with the limits in Conditions D.2.1, D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.4.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equation:

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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Devices - Stack # **Emission Units**	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
Filters - D-333A EU-323	70.0	47.8
Filters - D-333B EU-333	70.0	47.8
Filters - D-333C EU-323 EU-333	70.0 70.0	47.8 47.8 Total 95.6

D.4.3 PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 0.005 gr/dscf of exhaust air and 0.8 pound per hour.

(b) PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 2.5 pound per hour.

(c) PM emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 0.005 gr/dscf of exhaust air and 0.93 pound per hour.

(d) PM_{10} emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 2.5 pound per hour.

(e) Total CO emissions from the Disa 1 Pouring and Cooling process (EU-323), the Disa 1 Shakeout (EU-324) in Section D.5, and the Disa 1 Casting Cooling Process (EU-325) in Section D.5 combined shall not exceed 6 pounds per ton of metal throughput.

(f) Total CO emissions from the Disa 2 Pouring and Cooling process (EU-333), the Disa 2 Shakeout (EU-334) in Section D.6, and the Disa 2 Casting Cooling Process (EU-335) in Section D.6 combined shall not exceed 6 pounds per ton of metal throughput.

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the in-line filters D-333, the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333).

Compliance Determination Requirements

D.4.5 Particulate Control [326 IAC 2-7-6(6)] [326 IAC 2-2-3]

In order to comply with Conditions D.4.2, D.4.3(a), (b), (c), and (d), the in-line filters for particulate control shall be functional and control emissions from the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333) at all times that the pouring and cooling process is in operation.

D.4.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.4.2, D.4.3(a), (b), (c), and (d), the Permittee shall perform PM and PM_{10} testing for the in-line filters controlling the Disa 1 Pouring and Cooling process (EU-323) and the Disa 2 Pouring and Cooling process (EU-333).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.7 Visible Emissions Notations

(a) Visible Emission Notations:

(1) Visible emission notations of the Disa 1 pouring and cooling process (EU-323) Stack exhaust D-333A shall be performed at least once per day during normal daylight operations, and

(2) Visible emission notations of the Disa 2 pouring and cooling process (EU-333) Stack exhaust D-333B shall be performed at least once per day during normal daylight operations, or

(3) Visible emission notations of the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333) Stack exhaust D-333C shall be performed at least once per day during normal daylight operations.

A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) 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 visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.4.8 In-Line Filter Inspections

Daily inspections shall be performed to verify the placement, integrity and particulate loading of the in-line filters associated with the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333). If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.9 Record Keeping Requirements

(a) To document compliance with Condition D.4.1(a), (b), and (e), the Permittee shall maintain records of the amount of metal processed by the Disa 1 Pouring and Cooling process (EU-323), the Disa 1 Shakeout (EU-324) in Section D.5, the Disa 2 Pouring and Cooling process (EU-333), the Disa 2 Shakeout (EU-334) in Section D.6, on a monthly basis.

(b) To document compliance with Condition D.4.7(a), the Permittee shall maintain records of visible emission notations of Stack exhausts D-333A and D-333B or D-333C once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.4.8, the Permittee shall maintain records of the results of the daily in-line filter inspections required under Condition D.4.8. The Permittee shall include in its daily record when a filter inspection is not performed and the reason for the lack of a filter inspection (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.4.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.1(a), (b), and (e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Disa 1 Processes

(n) One (1) Disa 1/Disa 2 sand system, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 60 tons of sand per hour.

(p) One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled by baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(q) One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6, exhausted to Stack DC-6/7, and DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(r) One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(s) One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

(x) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 VOC BACT and PSD Minor Limits [326 IAC 8-1-6] [326 IAC 2-2]

(a) The throughput of metal to the Disa 1 casting shakeout process (EU-324) shall be limited to less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total VOC emissions shall not exceed 0.80 pound per ton of metal from the Disa 1 pouring and cooling process (EU-323) in Section D.4 and the Disa 1 casting shakeout process (EU-324).

(c) The total throughput of metal to the Disa 1 pouring and cooling process (EU-323) in Section D.4, the Disa 1 casting shakeout process (EU-324), the Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334) shall be limited to less than 84,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) Compliance with (a) and (b) above combined with the limits in Conditions D.4.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 1 process.

(e) Compliance with (b) and (c) above combined with the limits in Conditions D.2.1, D.4.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.5.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Devices - Stack # **Emission Units**	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
Baghouses DC-6 & DC-7 - DC-6/7	60	46.3
EU-321	70	47.8
EU-324	10	19.2
EU-325		Total 113.3
Baghouse DC-8 - internal	10	19.2
EU-411	10	19.2
EU-413	10	19.2
EU-431	10	19.2
EU-325		Total 76.8

D.5.3 PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) Total PM emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 0.003 gr/dscf of exhaust air and 2.36 pounds per hour.

(b) Total PM_{10} emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 4.6 pound per hour.

(c) PM emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.003 gr/dscf of exhaust air and 0.42 pound per hour.

(d) PM_{10} emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.42 pound per hour.

(e) Total CO emissions from the Disa 1 Pouring and Cooling process (EU-323) in Section D.4, the Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325) combined shall not exceed 6.0 pounds per ton of metal throughput.

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-6, DC-7 and DC-8, the in-line filters D-333, the Disa 1/Disa 2 sand system (EU-321), the Disa 1 casting shakeout process (EU-324), the Disa 1 Shot Blast (EU-411), and the Disa 2 shotblast unit (EU-431).

Compliance Determination Requirements

D.5.5 Particulate Control [326 IAC 2-7-6(6)] [326 IAC 2-2-3]

(a) In order to comply with Conditions D.5.2 and D.5.3(a) and (b), baghouse DC-6 for particulate control shall be in operation and control emissions from the Disa 1/Disa 2 sand system (EU-321) and casting cooling process (EU-325) at all times that these processes are in operation.

(b) In order to comply with Conditions D.5.2 and D.5.3(a) and (b), baghouse DC-7 for particulate control shall be in operation and control emissions from the Disa 1 casting shakeout process (EU-324) at all times that this process is in operation.

(c) In order to comply with Conditions D.5.2 and D.5.3(c) and (d), baghouse DC-8 for particulate control shall be in operation and control emissions from the Disa 1 casting cooling process(EU-325), the Disa 1 shotblast unit (EU-411), the Disa 1 grinding process (EU-413), and the Disa 2 shotblast unit (EU-431) at all times that these processes are in operation.

(d) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.5.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.5.3, the Permittee shall perform PM and PM_{10} testing for the baghouse DC-6 controlling the Disa 1/Disa 2 Sand System (EU-321) and the Disa 1 Casting Cooling (EU-325), baghouse DC-7 controlling the Disa 1 Shakeout (EU-324), and the baghouse DC-8 controlling the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 1 Grinding (EU-413), and the Disa 2 Shot Blast (EU-431).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.5.7 Visible Emissions Notations

(a) Visible emission notations:

(1) Visible emission notations of the Disa 1/Disa 2 sand system (EU-321), Disa 1 casting shakeout process (EU-324) and Disa 1 casting cooling process (EU-325), Stack exhaust DC-6/7 shall be performed at least once per day during normal daylight operations.

(2) Visible emissions notations of the Disa 1 casting cooling process (EU-325), the Disa 1 shotblast unit (EU-411), the Disa 1 grinding process (EU-413), and the Disa 2 Shotblast unit (EU-431) controlled by baghouse DC-8, shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) 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 visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.5.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouse DC-6 used in conjunction with the Disa 1 sand system (EU-321) and the Disa 1 casting cooling (EU-325) at least once per day when these Disa 1 processes are in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the baghouse DC-7 used in conjunction with the Disa 1 casting shakeout process (EU-324) at least once per day when this Disa 1 process is in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The Permittee shall record the pressure drop across the baghouse DC-8 used in conjunction with the Disa 1 casting cooling process (EU-325), the Disa 1 shotblast unit (EU-411), the Disa 1 grinding process (EU-413), and the Disa 2 Shotblast unit (EU-431) at least once per day when these Disa 1 processes are in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(d) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.5.9 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.10 Record Keeping Requirements

(a) To document compliance with Conditions D.5.1(a) and D.5.1(c), the Permittee shall maintain records of the amount of metal processed by the Disa 1 pouring and cooling (EU-323) in Section D.4, the Disa 1 casting shakeout process (EU-324), and Disa 1 casting cooling process (EU-325) on a monthly basis.

(b) To document compliance with Condition D.5.7(a), the Permittee shall maintain records of visible emission notations of Stack exhaust DC-6/7 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.5.7(b), the Permittee shall maintain records of visible emission notations of the Disa 1 casting cooling process (EU-325), the Disa 1 shotblast unit (EU-411), the Disa 1 grinding process (EU-413), and the Disa 2 Shotblast unit (EU-431) controlled by baghouse DC-8, once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not exhaust to the atmosphere).

(d) To document compliance with Conditions D.5.8(a) and D.5.8(b), the Permittee shall maintain records once per day of the pressure drop for baghouses DC-6 and DC-7 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(e) To document compliance with Condition D.5.8(c), the Permittee shall maintain records once per day of the pressure drop for baghouse DC-8 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.5.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1(a) and D.5.1(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Disa 2 Processes

(t) One (1) Disa 2 sand muller, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 60 tons of sand per hour.

(v) One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(w) One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(y) One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 VOC BACT and PSD Minor Limits [326 IAC 8-1-6] [326 IAC 2-2]

(a) The amount of metal processed by the Disa 2 pouring and cooling process (EU-333) in Section D.4 and the Disa 2 shakeout system (EU-334) shall each be less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total VOC emissions shall not exceed 0.80 pound per ton of metal throughput from the Disa 2 pouring and cooling process (EU-333) in Section D.4 and the Disa 2 shakeout system (EU-334).

(c) The total throughput of metal to the Disa 2 pouring and cooling process (EU-333) in Section D.4, the Disa 2 shakeout system (EU-334), the Disa 1 pouring and cooling process (EU-323) in Section D.4, and the Disa 1 casting shakeout process (EU-324), shall be limited to less than 84,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) Compliance with (a) and (b) above combined with the limits in Conditions D.4.1 and D.5.1 shall limit the potential to emit VOC from the Disa 2 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 2 process.

(e) Compliance with (b) and (c) above combined with the limits in Conditions D.2.1, D.4.1 and D.5.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.6.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Devices - Stack # **Emission Units**	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
Baghouse DC-11 - DC-11 EU-331 EU-334	60 70	46.3 47.8 Total 94.1
Baghouse DC-12 – internal EU-335 EU-433	10 10	19.2 19.2 Total 38.4

D.6.3 PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the baghouse DC-11 controlling emissions from the Disa 2 Sand Muller (EU-331) and Disa 2 Shakeout (EU-334) shall not exceed 0.003 gr/dscf of exhaust air and 1.21 pounds per hour.

(b) PM_{10} emissions from the baghouse DC-11 controlling emissions from the Disa 2 Sand Muller (EU-331) and Disa 2 Shakeout (EU-334) shall not exceed 1.0 pounds per hour.

(c) PM emissions from the baghouse DC-12 controlling emissions from Disa 2 Casting Cooling (EU-335) and Disa 2 Grinding (EU-433) shall not exceed 0.003 gr/dscf of exhaust air and 0.84 pound per hour.

(d) PM_{10} emissions from the baghouse DC-12 controlling emissions from Disa 2 Casting Cooling (EU-335) and Disa 2 Grinding (EU-433) shall not exceed 0.84 pound per hour.

(e) Total CO emissions from the Disa 2 Pouring and Cooling process (EU-333) in Section D.4, the Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335) combined shall not exceed 6.0 pounds per ton of metal throughput.

D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-8, DC-11, DC-12 , the Disa 2 sand muller (EU-331) and Disa 2 shakeout system (EU-334).

Compliance Determination Requirements

D.6.5 Particulate Control [326 IAC 2-7-6(6)] [326 IAC 2-2-3]

(a) In order to comply with Conditions D.6.2 and D.6.3, baghouse DC-11 for particulate control shall be in operation and control emissions from the Disa 2 sand muller (EU-331) and Disa 2 shakeout system (EU-334) at all times that either of these Disa 2 processes are in operation.

(b) In order to comply with Conditions D.6.2 and D.6.3, baghouse DC-12 for particulate control shall be in operation and control emissions from the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) at all times that these Disa 2 processes are in operation.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.6.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.3, the Permittee shall perform PM and PM_{10} testing for the baghouse DC-11 controlling the Disa 2 sand muller (EU-331) and Disa 2 shakeout system (EU-334), and for the baghouse DC-12 controlling the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.7 Visible Emissions Notations

(a) Visible emission notations:

(1) Visible emission notations of the Disa 2 sand system (EU-331) and the Disa 2 shakeout system (EU-334) Stack exhausts DC-11 shall be performed at least once per day during normal daylight operations.

(2) Visible emissions notations of the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) controlled by baghouse DC-12 shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) 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 visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.6.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across baghouse DC-11 used in conjunction with the Disa 2 sand muller (EU-331) and Disa 2 shakeout system (EU-334) at least once per day when these Disa 2 processes are in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across baghouse DC-12 used in conjunction with the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) at least once per day when these Disa 2 processes are in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.6.9 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.10 Record Keeping Requirements

(a) To document compliance with Conditions D.6.1(a) and D.6.1(c) the Permittee shall maintain records of the amount of metal processed by the Disa 2 pouring and cooling (EU-333) in Section D.4, the Disa 2 shakeout system (EU-334), and the Disa 2 Casting Cooling Process (EU-335) on a monthly basis.

(b) To document compliance with Condition D.6.7(a)(1), the Permittee shall maintain records of visible emission notations of Stack exhaust DC-11 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.6.7(a)(2), the Permittee shall maintain records of visible emission notations of the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433), controlled by baghouse DC-12 , once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not exhaust to the atmosphere).

(d) To document compliance with Condition D.6.8(a), the Permittee shall maintain records once per day of the pressure drop for baghouse DC-11 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(e) To document compliance with Condition D.6.8(b), the Permittee shall maintain records once per day of the pressure drop for baghouse DC-12 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.6.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(a) and D.6.1(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Phenolic Urethane Cold Box Core Production System

(ee) Six (6) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2 pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:

(1) EU-212a, constructed in 1989, served by mixer A, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(2) EU-212b, constructed in 1991, served by mixer B, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(3) EU-212c, constructed in 1993, served by mixer C, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(4) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(5) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(6) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.

(ff) One (1) core wash operation (dip tank), identified as EU-503, constructed in 1972, emissions uncontrolled, nominal capacity: 2.8 tons of core per hour and 5.7 pounds of core wash per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 VOC BACT and PSD Minor Limit [326 IAC 8-1-6]

(a) VOC delivered to the core wash operation (EU-503) shall be less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Compliance with this limit shall limit the potential to emit VOC from the core wash operation (EU-503), to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the core wash operation (EU-503).

(c) Compliance with this limit combined with the limits in Conditions D.2.1 and D.3.4 shall limit the potential to emit VOC from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.7.2 Resins and Catalysts PSD and VOC BACT Minor Limits [326 IAC 2-2] [326 IAC 8-1-6]

(a) The six (6) phenolic urethane cold box core machines shall not use resins and/or catalysts that contain any triethylamine (TEA). Compliance with this TEA content limitation shall render the requirements of 40 CFR 63, Subpart EEEEE not applicable to the core machines.

(b) The total resin usage in the three (3) phenolic urethane cold box core machines identified as EU-213, EU-231a and EU-231b shall not exceed 84,000 pounds per twelve (12) consecutive period with compliance determined at the end of each month.

(c) VOC shall not exceed 0.05 pounds per pound of resin.

(d) The total catalyst gas usage in the three (3) phenolic urethane cold box core machines identified as EU-213, EU-231a and EU-231b shall not exceed 6,000 pounds per twelve (12) consecutive period with compliance determined at the end of each month.

(e) VOC emissions are 1 pound per pound of catalyst gas.

(f) Compliance with the limits specified in (b) through (e) render the requirements of 326 IAC 2-2 not applicable to the Disa 1 and Disa 2 lines and also render the requirements of 326 IAC 8-1-6 not applicable.

Compliance Determination Requirements

D.7.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

Compliance with the VOC usage limitations contained in Condition D.7.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.7.4 Record Keeping Requirements

(a) To document compliance with Condition D.7.2, the Permittee shall maintain records of the amount of resins and catalyst gas used on a monthly basis.

(b) To document compliance with Condition D.7.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.7.1. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.

(1) The VOC content of each material used.

(2) The amount of material less water used on monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(3) The weight of VOCs emitted for each compliance period.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.7.5 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1, D.7.2(b), and D.7.2(d) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Magnesium Treatment System

(cc) One (1) Hunter magnesium treatment system, identified as EU-120, permitted in 2009, controlled by baghouse DC-10, exhausted internally, nominal capacity: 10.3 tons of metal per hour.

(dd) One (1) Disa magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 VOC BACT and PSD Minor Limits [326 IAC 2-2] [326 IAC 8-1-6]

(a) The amount of ductile iron treated in the Disa magnesium treatment system (EU-119) shall not exceed 100,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.005 pounds per ton of metal treated.

Compliance with these limits shall limit the potential to emit VOC from the Disa magnesium treatment system (EU-119) to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 (PSD) not applicable.

D.8.2 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter magnesium treatment system (EU-120) shall not exceed 16,600 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Stack DC-10 emissions from the Hunter magnesium treatment system (EU-120) shall not exceed:

(1) 3.0 pounds of PM per ton of metal throughput, and

(2) 1.8 pounds of PM_{10} per ton of metal throughput.

Compliance with these limits shall limit the potential to emit PM and PM_{10} from Stack DC-10 from the Hunter magnesium treatment system (EU-120), to less than twenty-five (25) tons per year of PM, and less than fifteen (15) tons per year of PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to add the Hunter magnesium treatment system (EU-120).

D.8.3 PM and PM_{10} PSD BACT Requirements [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.003 gr/dscf of exhaust air and 0.13 pound per hour.

(b) PM_{10} emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.13 pound per hour.

D.8.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Disa magnesium treatment system (EU-119), the Hunter magnesium treatment system (EU-120), and the baghouse (DC-10) shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

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

Emission Unit/Control Device - Stack #	**Process Weight** (tons per hour)	**Allowable PM Emission Rate** (pounds per hour)
DC-10 - DC-10		
EU-119	20	30.5
EU-120	10.3	19.56

D.8.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the Disa magnesium treatment system (EU-119), the Hunter magnesium treatment system (EU-120), and the control device, baghouse DC-10.

Compliance Determination Requirement

D.8.6 Particulate Control [326 IAC 2-7-6(6)] [326 IAC 2-2-3]

(a) In order to comply with Conditions D.8.2, D.8.3, and D.8.4, baghouse DC-10 for particulate control shall be in operation and control emissions from the Disa magnesium treatment system (EU-119) and the Hunter magnesium treatment system (EU-120) at all times that either magnesium treatment system process is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.8.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.8.2, D.8.3, and D.8.4, the Permittee shall perform PM and PM_{10} testing for the Disa magnesium treatment system (EU-119) and the Hunter magnesium treatment system (EU-120), controlled by baghouse DC-10, within 180 days of operation of the Hunter magnesium treatment system (EU-120).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.8.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the baghouse DC-10 used in conjunction with the Disa magnesium treatment system (EU-119) and the Hunter magnesium treatment system (EU-120) at least once per day when the magnesium process is in operation and exhausting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.8.9 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.10 Record Keeping Requirements

(a) To document compliance with Condition D.8.1(a), the Permittee shall maintain records of the amount of ductile iron treated in the Disa magnesium treatment system (EU-119) on a monthly basis.

(b) To document compliance with Condition D.8.2(a), the Permittee shall maintain records of the amount of ductile iron treated in the Hunter magnesium treatment system (EU-120) on a monthly basis.

(c) To document compliance with Condition D.8.8, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.8.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.8.1(a) and D.8.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Storage Silos

(z) One (1) Disa core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30 tons of core sand and 0.85 tons of core sand per hour.

(aa) One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, constructed in 1996, controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.

(m) One (1) Hunter bond storage silo, identified as EU-204, constructed in 1980, controlled by a bin vent filter, capacity: 10 tons of bond per hour

(bb) One (1) Disa New Sand Day Bin, identified as EU-DNS, constructed in 1996, controlled by a bin vent, internally vented, capacity: 10 tons of sand and 66 tons of sand per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]

(a) The amount of bond throughput to the Hunter bond storage silo (EU-204) shall not exceed 10,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Emissions from the Hunter bond storage silo (EU-204) shall not exceed:

(1) 0.08 pounds of PM per ton, and

(2) 0.08 pounds of PM10 per ton.

Compliance with these limits combined with the limits in Condition D.3.1 shall limit the potential to emit PM and PM_{10} from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of PM and PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.9.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following individual emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Device - Stack # Emission Units	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
Bin Vent Filter - Bin Vent EU-201	0.85	3.68
Bin Vent Filter - Bin Vent EU-202	20	30.5
Bin Vent Filter - Bin Vent EU-204	10	19.2
Bin Vent Filter - Bin Vent Disa New Sand Day Bin	66	47.2

D.9.3 PM and PM_{10} PSD BACT Requirements [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.003 gr/dscf of exhaust air and 0.001 pound per hour.

(b) PM_{10} emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.001 pound per hour.

(c) PM emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(d) PM_{10} emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.04 pound per hour.

(e) PM emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(f) PM_{10} emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.04 pound per hour.

D.9.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the bin vent filters and the Disa core sand storage silo (EU-201), the Disa Sand and Bond Silos (EU-202), the Hunter bond storage silo (EU-204), and the Disa New Sand Day Bin (EU-DNS).

Compliance Determination Requirement

D.9.5 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Conditions D.9.1(d), D.9.2, and D.9.3, the bin vent filters for particulate control shall be in operation and control emissions from the Disa core sand storage silo (EU-201), the Disa Sand and Bond Silos (EU-202), the Hunter bond storage silo (EU-204), and the Disa New Sand Day Bin (EU-DNS) at all times that loading and unloading is in operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.6 Record Keeping Requirements

(a) To document compliance with Condition D.9.1(a), the Permittee shall maintain records of the amount of bond processed by the Hunter bond storage silo (EU-204) on a monthly basis.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

D.9.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.9.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Insignificant Activities

(b) One (1) electric induction holding furnace, identified as EU-113, constructed in 1996 [326 IAC 6-3-2].

(c) One (1) pattern shop operation, equipped with a baghouse at 2,000 cubic feet per minute and 0.03 grains per dry standard cubic feet, constructed in 1997 [326 IAC 6-3-2].

(d) One (1) Hunter sample shotblast operation, equipped with a baghouse at 1,500 cubic feet per minute and 0.03 grains per dry standard cubic feet constructed in 2001 [326 IAC 6-3-2].

(e) One (1) dry ice blast operation, equipped with a 2,000 cubic feet per minute blower attached to a filter, exhausted internally, constructed in 2003 [326 IAC 6-3-2].

(f) One (1) Disa sample shotblast operation, equipped with a 1,000 cubic feet per minute baghouse, deemed an insignificant activity, constructed in 1996 [326 IAC 6-3-2].

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rates from the electric induction holding furnace (EU-113), the pattern shop operation, the Hunter sample shotblast operation, the dry ice blast operation, the Disa sample shotblast operation, and the associated control devices shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirement

D.10.2 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Condition D.10.1, the control equipment for particulate control shall be in operation and control emissions from the pattern shop operation and the sample shotblast operation at all times that the these insignificant activities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

SECTION E.1 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries [326 IAC 20-92-1] [40 CFR Part 63, Subpart EEEEE]

Emission Unit Description: Iron and Steel Foundries - NESHAP Subpart EEEEE

Existing: (Source constructed or reconstructed before December 23, 2002)

Under the Iron and Steel Foundries NESHAP (40 CFR 63, Subpart EEEEE), the one (1) natural gas-fired No. 1 preheater and a charge handling system, identified as EU-118, the two (2) electric induction furnaces, identified as EU-114 and EU-115, the three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, the Hunter pouring and cooling process, identified as EU-313, the Disa 1 pouring and cooling process, identified as EU-323, and the Disa 2 pouring and cooling process, identified as EU-333, are considered an existing affected source.

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the preheaters, metal melt furnaces, and pouring and cooling processes, identified as EU-118, EU-114, EU-115, EU-131, EU-132, EU-133, EU-313, EU-323 and EU-333 as specified in Table 1 of 40 CFR 63, Subpart EEEEE.

E.1.2 National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Requirements [326 IAC 20-92-1] [40 CFR Part 63, Subpart EEEEE]

Pursuant to 40 CFR Part 63, Subpart EEEEE, the Permittee shall comply with the following provisions of the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries, which are included as Attachment A and incorporated by reference as 326 IAC 20-92 for preheaters, metal melt furnaces, and pouring and cooling processes, identified as EU-118, EU-114, EU-115, EU-131, EU-132, EU-133, EU-313, EU-323 and EU-333 with a compliance date of April 22, 2005:

(a) 40 CFR 63.7680
(b) 40 CFR 63.7681
(c) 40 CFR 63.7682(a-c)
(d) 40 CFR 63.7683(a-c) and (f)
(e) 40 CFR 63.7690(a)(1)(i-ii), (a)(5)(i-ii), and (a)(7)
(f) 40 CFR 63.7700(a), (b), and (e)(1-2)
(g) 40 CFR 63.7710(a), (b)(1), (b)(3), (b)(4-6)
(h) 40 CFR 63.7720
(i) 40 CFR 63.7730(a)
(j) 40 CFR 63.7731
(k) 40 CFR 63.7732(a), (b)(1), (b)(3-5), (c)(1), (c)(3-5), (d), and (h)
(l) 40 CFR 63.7733(a), (e), and (f)
(m) 40 CFR 63.7734(a)(1), (a)(5), and (a)(7)
(n) 40 CFR 63.7735(a) and (d)
(o) 40 CFR 63.7736
(p) 40 CFR 63.7740(a) and (b)
(q) 40 CFR 63.7741(a), (b), and (f)

(r) 40 CFR 63.7742
(s) 40 CFR 63.7743(a)(1), (a)(5), (a)(7), (a)(9), (a)(12), (b) and (c)
(t) 40 CFR 63.7744(a) and (c)
(u) 40 CFR 63.7745
(v) 40 CFR 63.7746
(w) 40 CFR 63.7747
(x) 40 CFR 63.7750(a), (b), (d), and (e)
(y) 40 CFR 63.7751
(z) 40 CFR 63.7752
(aa) 40 CFR 63.7753
(bb) 40 CFR 63.7760
(cc) 40 CFR 63.7761
(dd) 40 CFR 63.7765
(ee) Table 1 to Subpart EEEEE of Part 63

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify): _____

☐ Report (specify): _____

☐ Notification (specify): _____

☐ Affidavit (specify): _____

☐ Other (specify): _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name:	Rochester Metal Products Corporation
Source Address:	616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address:	P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.:	T 049-5999-00002

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency
Describe the cause of the Emergency

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? ☐ Y ☐ N Describe: Type of Pollutants Emitted: ☐ TSP ☐ PM-10 ☐ SO_2 ☐ VOC ☐ NO_X ☐ CO ☐ Pb ☐ other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Entire Source
Pollutant: CO
Parameter: Natural gas usage
Limit: Less than 150 million cubic feet (MMCF) total per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Source-Wide Natural Gas Usage (MMCF)	Source-Wide Natural Gas Usage (MMCF)	Source-Wide Natural Gas Usage (MMCF)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name:	Rochester Metal Products Corporation
Source Address:	616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address:	P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.:	T 049-5999-00002
Facility:	Hunter pouring cooling process (EU-313), Hunter casting cooling process (EU-15), Hunter shotblast process (EU-410) and Hunter grinding process (EU-412)
Pollutants:	PM and PM_{10}
Parameter:	Throughput of metal
Limit:	Less than 45,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Hunter face sand muller (EU-316)
Pollutants: PM and PM_{10}
Parameter: Amount of sand
Limit: Less than 500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Sand Throughput (tons)	Sand Throughput (tons)	Sand Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name:	Rochester Metal Products Corporation
Source Address:	616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address:	P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.:	T 049-5999-00002
Facility:	Hunter sand system (EU-311), Hunter shakeout process (EU-314), and Hunter sand storage silo (EU-203)
Pollutants:	PM and PM_{10}
Parameter:	Number of hours of operation
Limit:	Less than 6,500 hours each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Number of Hours of Operation	Number of Hours of Operation	Number of Hours of Operation
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Hunter pouring cooling process (EU-313) & Hunter shakeout process (EU-314)
Pollutants: CO and VOC
Parameter: Throughput of metal
Limit: Less than 45,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

EU-_____

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Hunter Line No. 4 of the Hunter pouring cooling process (EU-313)
Pollutant: VOC
Parameter: Throughput of metal
Limit: Less than 36,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Disa 1 pouring cooling process (EU-323) & Disa 1 casting shakeout process (EU-324)
Pollutant: VOC
Parameter: Throughput of metal
Limit: Less than 62,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

EU-_____

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name:	Rochester Metal Products Corporation
Source Address:	616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address:	P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.:	T 049-5999-00002
Facility:	Disa 1 pouring cooling process (EU-323), Disa 1 casting shakeout process (EU-324), Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334)
Pollutant:	VOC
Parameter:	Total throughput of metal
Limit:	Less than 84,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Disa 2 pouring and cooling process (EU-333) & Disa 2 shakeout system (EU-334)
Pollutant: VOC
Parameter: Throughput of metal
Limit: Less than 62,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

EU-_____

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Core sand storage silo (EU-200)
Pollutants: PM and PM_{10}
Parameter: Number of hours of operation
Limit: Less than 6,500 hours each per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Number of Hours of Operation	Number of Hours of Operation	Number of Hours of Operation
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Core Wash Operation (EU-503)
Pollutant: VOC
Parameter: VOC delivered to the core wash operation
Limit: Less than twenty-five (25) tons total per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	VOC (tons)	VOC (tons)	VOC (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Magnesium treatment system (EU-119)
Pollutant: VOC
Parameter: Throughput of metal
Limit: Less than 100,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Hunter magnesium treatment system (EU-120)
Pollutants: PM and PM_{10}
Parameter: Throughput of metal
Limit: Less than 16,600 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

EU-_____

QUARTER: _____ YEAR: _____

Month	Metal Throughput (tons)	Metal Throughput (tons)	Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Hunter bond storage silo (EU-204)
Pollutants: PM and PM_{10}
Parameter: Throughput of bond
Limit: Less than 10,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Bond Throughput (tons)	Bond Throughput (tons)	Bond Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Three (3) phenolic urethane cold box core machines (EU-213 and EU-231a and b)
Pollutant: VOC
Parameter: Resin Usage
Limit: Less than 84,000 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Resin Usage (pounds)	Resin Usage (pounds)	Resin Usage (pounds)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002
Facility: Three (3) phenolic urethane cold box core machines (EU-213 and EU-231a and b)
Pollutant: VOC
Parameter: Catalyst Gas Usage
Limit: Less than 6,000 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Catalyst Gas Usage (pounds)	Catalyst Gas Usage (pounds)	Catalyst Gas Usage (pounds)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Rochester Metal Products Corporation
Source Address: 616 Indiana Avenue, Rochester, Indiana 46975
Mailing Address: P.O. Box 488, Rochester, Indiana 46975
Part 70 Permit No.: T 049-5999-00002

Months: _____ **to** _____ **Year:** _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Attachment A –National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries [326 IAC 20-92] [40 CFR Part 63, Subpart EEEEE]

Source Description and Location

Source Name:	Rochester Metal Products Corp.
Source Location:	616 Indiana Avenue, Rochester, Indiana 46975
County:	Fulton
SIC Code:	3321
Operation Permit No.:	T 049-5999-00002
Operation Permit Issuance Date:	December 22, 2006
Significant Source Modification No.:	049-24381-00002
Significant Permit Modification No.:	049-24477-00002
Permit Reviewer:	Kimberly Cottrell

NESHAP [40 CFR Part 63, Subpart EEEEE]

Source: 69 FR 21923, Apr. 22, 2004, unless otherwise noted.

What this Subpart Covers

§ 63.7680 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for iron and steel foundries. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart.

§ 63.7681 Am I subject to this subpart?

You are subject to this subpart if you own or operate an iron and steel foundry that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. Your iron and steel foundry is a major source of HAP for purposes of this subpart if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year or if it is located at a facility that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year as defined in §63.2.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, February 7, 2008]

§ 63.7682 What parts of my foundry does this subpart cover?

(a) The affected source is each new or existing iron and steel foundry.

(b) This subpart covers emissions from metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines, automated shakeout lines, and mold and core making lines. This subpart also covers fugitive emissions from foundry operations.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source before December 23, 2002.

(d) An affected source is new if you commenced construction or reconstruction of the affected source on or after December 23, 2002. An affected source is reconstructed if it meets the definition of "reconstruction" in §63.2.

§ 63.7683 When do I have to comply with this subpart?

(a) Except as specified in paragraph (b) of this section, if you have an existing affected source, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than April 23, 2007. Major source status for existing affected sources must be determined no later than April 23, 2007.

(b) If you have an existing affected source, you must comply with the work practice standards in §63.7700(b) or (c), as applicable, no later than April 22, 2005.

(c) If you have a new affected source for which the initial startup date is on or before April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by April 22, 2004.

(d) If you have a new affected source for which the initial startup date is after April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(e) If your iron and steel foundry is an area source that becomes a major source of HAP, you must meet the requirements of §63.6(c)(5).

(f) You must meet the notification and schedule requirements in §63.7750. Note that several of these notifications must be submitted before the compliance date for your affected source.

Emissions Limitations

§ 63.7690 What emissions limitations must I meet?

(a) You must meet the emissions limits or standards in paragraphs (a)(1) through (11) of this section that apply to you. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for particulate matter (PM) in paragraph (a)(1)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(1)(ii) of this section:

(i) 0.005 grains of PM per dry standard cubic foot (gr/dscf), or

(ii) 0.0004 gr/dscf of total metal HAP.

(2) For each cupola metal melting furnace at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(2)(i) or (ii) of this section or, alternatively the limit for total metal HAP in paragraph (a)(2)(iii) or (iv) of this section:

(i) 0.006 gr/dscf of PM; or

(ii) 0.10 pound of PM per ton (lb/ton) of metal charged, or

(iii) 0.0005 gr/dscf of total metal HAP; or

(iv) 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(3)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(3)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(4)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(4)(ii) of this section:

(i) 0.001 gr/dscf of PM, or

(ii) 0.00008 gr/dscf of total metal HAP.

(5) For each pouring station at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(5)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(5)(ii) of this section:

(i) 0.010 gr/dscf of PM, or

(ii) 0.0008 gr/dscf of total metal HAP.

(6) For each pouring area or pouring station at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(6)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(6)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, you must not discharge any fugitive emissions to the atmosphere from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, you must not discharge emissions of volatile organic hazardous air pollutants (VOHAP) through a conveyance to the atmosphere that exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen.

(9) As an alternative to the work practice standard in §63.7700(e) for a scrap preheater at an existing iron and steel foundry or in §63.7700(f) for a scrap preheater at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed a flow-weighted average of 20 ppmv.

(11) For each triethylamine (TEA) cold box mold or core making line at a new or existing iron and steel foundry, you must meet either the emissions limit in paragraph (a)(11)(i) of this section or, alternatively the emissions standard in paragraph (a)(11)(ii) of this section:

(i) You must not discharge emissions of TEA through a conveyance to the atmosphere that exceed 1 ppmv, as determined according to theperformance test procedures in § 63.7732(g); or

(ii) You must reduce emissions of TEA from each TEA cold box mold or core making line by at least 99 percent, as determined according to the performance test procedures in § 63.7732(g).

(b) You must meet each operating limit in paragraphs (b)(1) through (5) of this section that applies to you.

(1) You must install, operate, and maintain a capture and collection system for all emissions sources subject to an emissions limit for VOHAP or TEA in paragraphs (a)(8) through (11) of this section.

(i) Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(ii) You must operate each capture system at or above the lowest value or settings established as operating limits in your operation and maintenance plan.

(2) You must operate each wet scrubber applied to emissions from a metal melting furnace, scrap preheater, pouring area, or pouring station subject to an emissions limit for PM or total metal HAP in paragraphs (a)(1) through (6) of this section such that the 3-hour average pressure drop and scrubber water flow rate does not fall below the minimum levels established during the initial or subsequent performance test.

(3) You must operate each combustion device applied to emissions from a cupola metal melting furnace subject to the emissions limit for VOHAP in paragraph (a)(8) of this section, such that the 15-minute average combustion zone temperature does not fall below 1,300 degrees Fahrenheit (°F). Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.

(4) You must operate each combustion device applied to emissions from a scrap preheater subject to the emissions limit for VOHAP in paragraph (a)(9) of this section or from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section, such that the 3-hour average combustion zone temperature does not fall below the minimum level established during the initial or subsequent performance test.

(5) You must operate each wet acid scrubber applied to emissions from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section such that:

(i) The 3-hour average scrubbing liquid flow rate does not fall below the minimum level established during the initial or subsequent performance test; and

(ii) The 3-hour average pH of the scrubber blowdown, as measured by a continuous parameter monitoring system (CPMS), does not exceed 4.5 or the pH of the scrubber blowdown, as measured once every 8 hours during process operations, does not exceed 4.5.

(c) If you use a control device other than a baghouse, wet scrubber, wet acid scrubber, or combustion device, you must prepare and submit a monitoring plan containing the information listed in paragraphs (c)(1) through (5) of this section. The monitoring plan is subject to approval by the Administrator.

(1) A description of the device;

(2) Test results collected in accordance with §63.7732 verifying the performance of the device for reducing emissions of PM, total metal HAP, VOHAP, or TEA to the levels required by this subpart;

(3) A copy of the operation and maintenance plan required by §63.7710(b);

(4) A list of appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limitation(s); and

(5) Operating parameter limits based on monitoring data collected during the performance test.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, February 7, 2008]

Work Practice Standards

§ 63.7700 What work practice standards must I meet?

(a) For each segregated scrap storage area, bin or pile, you must either comply with the certification requirements in paragraph (b) of this section, or prepare and implement a plan for the selection and inspection of scrap according to the requirements in paragraph (c) of this section. You may have certain scrap subject to paragraph (b) of this section and other scrap subject to paragraph (c) of this section at your facility provided the scrap remains segregated until charge make-up.

(b) You must prepare and operate at all times according to a written certification that the foundry purchases and uses only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids. For the purpose of this paragraph (b), “free organic liquids” is defined as material that fails the paint filter test by EPA Method 9095A, “Paint Filter Liquids Test” (Revision 1, December 1996), as published in EPA Publication SW–846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (incorporated by reference—see §63.14). Any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed and/or cleaned to the extent practicable such that the materials do not include lead components, mercury switches, chlorinated plastics, or free organic liquids can be included in this certification.

(c) You must prepare and operate at all times according to a written plan for the selection and inspection of iron and steel scrap to minimize, to the extent practicable, the amount of organics and HAP metals in the charge materials used by the iron and steel foundry. This scrap selection and inspection plan is subject to approval by the Administrator. You must keep a copy of the plan onsite and readily available to all plant personnel with materials acquisition or inspection duties. You must provide a copy of the material specifications to each of your scrap vendors. Each plan must include the information specified in paragraphs (c)(1) through (3) of this section.

(1) A materials acquisition program to limit organic contaminants according to the requirements in paragraph (c)(1)(i) or (ii) of this section, as applicable.

(i) For scrap charged to a scrap preheater, electric arc metal melting furnace, or electric induction metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the

presence of used oil filters, chlorinated plastic parts, organic liquids, and a program to ensure the scrap materials are drained of free liquids; or

(ii) For scrap charged to a cupola metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastic, and a program to ensure the scrap materials are drained of free liquids.

(2) A materials acquisition program specifying that the scrap supplier remove accessible mercury switches from the trunks and hoods of any automotive bodies contained in the scrap and remove accessible lead components such as batteries and wheel weights. You must either obtain and maintain onsite a copy of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable, or document your attempts to obtain a copy of these procedures from the scrap suppliers servicing your area.

(3) Procedures for visual inspection of a representative portion, but not less than 10 percent, of all incoming scrap shipments to ensure the materials meet the specifications.

(i) The inspection procedures must identify the location(s) where inspections are to be performed for each type of shipment. Inspections may be performed at the scrap supplier's facility. The selected location(s) must provide a reasonable vantage point, considering worker safety, for visual inspection.

(ii) The inspection procedures must include recordkeeping requirements that document each visual inspection and the results.

(iii) The inspection procedures must include provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and limiting purchases from vendors whose shipments fail to meet specifications for more than three inspections in one calendar year.

(iv) If the inspections are performed at the scrap supplier's facility, the inspection procedures must include an explanation of how the periodic inspections ensure that not less than 10 percent of scrap purchased from each supplier is subject to inspection.

(d) For each furan warm box mold or core making line in a new or existing iron and steel foundry, you must use a binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation as determined by the Material Safety Data Sheet. This requirement does not apply to the resin portion of the binder system.

(e) For each scrap preheater at an existing iron and steel foundry, you must meet either the requirement in paragraph (e)(1) or (2) of this section. As an alternative to the requirement in paragraph (e)(1) or (2) of this section, you must meet the VOHAP emissions limit in §63.7690(a)(9).

(1) You must operate and maintain a gas-fired preheater where the flame directly contacts the scrap charged; or

(2) You must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section.

(f) For each scrap preheater at a new iron and steel foundry, you must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section. As an alternative to this requirement, you must meet the VOHAP emissions limit in §63.7690(a)(9).

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7218, February 7, 2008]

Operation and Maintenance Requirements

§ 63.7710 What are my operation and maintenance requirements?

(a) As required by §63.6(e)(1)(i), you must always operate and maintain your iron and steel foundry, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device for an emissions source subject to a PM, metal HAP, TEA, or VOHAP emissions limit in §63.7690(a). Your operation and maintenance plan also must include procedures for igniting gases from mold vents in pouring areas and pouring stations that use a sand mold system. This operation and maintenance plan is subject to approval by the Administrator. Each plan must contain the elements described in paragraphs (b)(1) through (6) of this section.

(1) Monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan must also include requirements to repair the defect or deficiency as soon as practicable.

(2) Operating limits for each capture system for an emissions source subject to an emissions limit or standard for VOHAP or TEA in §63.7690(a)(8) through (11). You must establish the operating according to the requirements in paragraphs (b)(2)(i) through (iii) of this section.

(i) Select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you must use appropriate operating limit parameters that indicate the level of the ventilation draft and damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include, but are not limited to: volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage, or static pressure. Any parameter for damper position setting may be used that indicates the duct damper position related to the fully open setting.

(ii) For each operating limit parameter selected in paragraph (b)(2)(i) of this section, designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate (i.e., the operating limits with one furnace melting, two melting, as applicable to your plant).

(iii) Include documentation in your plan to support your selection of the operating limits established for your capture system. This documentation must include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of §63.7740(a), and the data used to set the value or setting for the parameter for each of your process configurations.

(3) Preventative maintenance plan for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(4) A site-specific monitoring plan for each bag leak detection system. For each bag leak detection system that operates on the triboelectric effect, the monitoring plan must be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document “Fabric Filter Bag Leak Detection Guidance” (EPA–454/R–98–015). This baghouse monitoring plan is subject to approval by the Administrator. The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all of the items identified in paragraphs (b)(4)(i) through (v) of this section.

(i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) How the bag leak detection system will be maintained including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output will be recorded and stored.

(5) Corrective action plan for each baghouse. The plan must include the requirement that, in the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions taken may include, but are not limited to:

(i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system.

(vi) Making process changes.

(vii) Shutting down the process producing the PM emissions.

(6) Procedures for providing an ignition source to mold vents of sand mold systems in each pouring area and pouring station unless you determine the mold vent gases either are not ignitable, ignite automatically, or cannot be ignited due to accessibility or safety issues. You must document and maintain records of this determination. The determination of ignitability, accessibility, and safety may encompass multiple casting patterns provided the castings utilize similar sand-to-metal ratios, binder formulations, and coating materials. The determination of ignitability must be based on observations of the mold vents within 5 minutes of pouring, and the flame must be present for at least 15 seconds for the mold vent to be considered ignited. For the purpose of this determination:

(i) Mold vents that ignite more than 75 percent of the time without the presence of an auxiliary ignition source are considered to ignite automatically; and

(ii) Mold vents that do not ignite automatically and cannot be ignited in the presence of an auxiliary ignition source more than 25 percent of the time are considered to be not ignitable.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, February 7, 2008]

General Compliance Requirements

§ 63.7720 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, or malfunction.

(b) During the period between the compliance date specified for your iron and steel foundry in §63.7683 and the date when applicable operating limits have been established during the initial performance test, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The startup, shutdown, and malfunction plan also must specify what constitutes a shutdown of a cupola and how to determine that operating conditions are normal following startup of a cupola.

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

Initial Compliance Requirements

§ 63.7730 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) As required by §63.7(a)(2), you must conduct a performance test no later than 180 calendar days after the compliance date that is specified in §63.7683 for your iron and steel foundry to demonstrate initial compliance with each emissions limitation in §63.7690 that applies to you.

(b) For each work practice standard in §63.7700 and each operation and maintenance requirement in §63.7710 that applies to you where initial compliance is not demonstrated using a performance test, you must demonstrate initial compliance no later than 30 calendar days after the compliance date that is specified for your iron and steel foundry in §63.7683.

(c) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, you must demonstrate initial compliance with either the proposed emissions limit or the promulgated emissions limit no later than October 19, 2004 or no later than 180 calendar days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, and you chose to comply with the proposed emissions limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emissions limit by October 19, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

§ 63.7731 When must I conduct subsequent performance tests?

(a) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP, VOHAP, and TEA emissions limitations in §63.7690 for your iron and steel foundry no

less frequently than every 5 years and each time you elect to change an operating limit or to comply with a different alternative emissions limit, if applicable. The requirement to conduct performance tests every 5 years does not apply to an emissions source for which a continuous emissions monitoring system (CEMS) is used to demonstrate continuous compliance.

(b) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.7690(a)(7) for your iron and steel foundry no less frequently than once every 6 months.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, February 7, 2008]

§ 63.7732 What test methods and other procedures must I use to demonstrate initial compliance with the emissions limitations?

(a) You must conduct each performance test that applies to your iron and steel foundry based on your selected compliance alternative, if applicable, according to the requirements in §63.7(e)(1) and the conditions specified in paragraphs (b) through (i) of this section.

(b) To determine compliance with the applicable emissions limit for PM in §63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (b)(1) through (6) of this section.

(1) Determine the concentration of PM according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5B, 5D, 5F, or 5I, as applicable, to determine the PM concentration. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch.

(2) Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater. For a cupola metal melting furnace at an existing iron and steel foundry that is subject to the PM emissions limit in

§63.7690(a)(ii), calculate the PM emissions rate in pounds of PM per ton (lb/ton) of metal charged using Equation 1 of this section:

$$EF_{PM} = C_{PM} x \left(\frac{Q}{M_{charge}} \right) x \left(\frac{t_{test}}{7{,}000} \right) \qquad \text{(Eq. 1)}$$

Where:

EF_{PM} = Mass emissions rate of PM, pounds of PM per ton (lb/ton) of metal charged;

C_{PM} = Concentration of PM measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per minute (dscfm);

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and
7,000 = Unit conversion factor, grains per pound (gr/lb).

(c) To determine compliance with the applicable emissions limit for total metal HAP in § 63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (c)(1) through (6) of this section.

(1) Determine the concentration of total metal HAP according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (c)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 29 to determine the total metal HAP concentration.

(2) A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater during each performance test run and calculate the total metal HAP emissions rate (pounds of total metal HAP per ton (lb/ton) of metal charged) using Equation 2 of this section:

$$EF_{TMHAP} = C_{TMHAP} x \left(\frac{Q}{M_{charge}} \right) x \left(\frac{t_{test}}{7,000} \right) \qquad \text{(Eq. 2)}$$

Where:

EF_{TMHAP} = Emissions rate of total metal HAP, pounds of total metal HAP per ton (lb/ton) of metal charged;

C_{TMHAP} = Concentration of total metal HAP measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dscfm;

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and

7,000 = Unit conversion factor, gr/lb.

(d) To determine compliance with the opacity limit in §63.7690(a)(7) for fugitive emissions from buildings or structures housing any iron and steel foundry emissions source at the iron and steel foundry, follow the procedures in paragraphs (d)(1) and (2) of this section.

(1) Using a certified observer, conduct each opacity test according to the requirements in EPA Method 9 (40 CFR part 60, appendix A) and §63.6(h)(5). The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.

(2) During testing intervals when PM performance tests, if applicable, are being conducted, conduct the opacity test such the opacity observations are recorded during the PM performance tests.

(e) To determine compliance with the applicable VOHAP emissions limit in §63.7690(a)(8) for a cupola metal melting furnace or in §63.7690(a)(9) for a scrap preheater, follow the test methods and procedures in paragraphs (e)(1) through (4) of this section.

(1) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of total gaseous nonmethane organics (TGNMO) or Method 25A to determine the concentration of total organic compounds (TOC), using hexane as the calibration gas.

(2) Determine the average VOHAP, TGNMO, or TOC concentration using a minimum of three valid test runs. Each test run must include a minimum of 60 continuous operating minutes.

(3) For a cupola metal melting furnace, correct the measured concentration of VOHAP, TGNMO, or TOC for oxygen content in the gas stream using Equation 3 of this section:

$$C_{VOHAP,10\%O_2} = C_{VOHAP}\left(\frac{10.9\%}{20.9\% - \%O_2}\right) \qquad \text{(Eq. 3)}$$

Where:

C_{VOHAP} = Concentration of VOHAP in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the concentration of TGNMO or TOC in ppmv as hexane as measured by Method 25 or 25A in 40 CFR part 60, appendix A; and

$\%O_2$ = Oxygen concentration in gas stream, percent by volume (dry basis).

(4) For a cupola metal melting furnace, measure the combustion zone temperature of the combustion device with the CPMS required in §63.7740(d) during each sampling run in 15-minute intervals. Determine and record the 15-minute average of the three runs.

(f) Follow the applicable procedures in paragraphs (f)(1) through (3) of this section to determine compliance with the VOHAP emissions limit in §63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines.

(1) Follow these procedures to demonstrate compliance by direct measurement of total hydrocarbons (a surrogate for VOHAP) using a volatile organic compound (VOC) CEMS.

(i) Using the VOC CEMS required in §63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) for 180 continuous operating minutes. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Reduce the monitoring data to hourly averages as specified in §63.8(g)(2).

(iii) Compute and record the 3-hour average of the monitoring data.

(2) As an alternative to the procedures in paragraph (f)(1) of this section, you may demonstrate compliance with the VOHAP emissions limit in §63.7690(a)(10) by establishing a site-specific TOC emissions limit that is correlated to the VOHAP emissions limit according to the procedures in paragraph (f)(2)(i) through (ix) of this section.

(i) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraph (f)(2)(ii) through (vi) of this section.

(ii) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(iii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iv) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(v) Method 4 to determine the moisture content of the stack gas.

(vi) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of TGNMO using hexane as the calibration gas.

(vii) Using the CEMS required in §63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) during each of the Method 18 (or Method 25) sampling runs. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(viii) Calculate the average VOHAP (or TGNMO) concentration for the source test as the arithmetic average of the concentrations measured for the individual test runs, and determine the average concentration of total hydrocarbon (as hexane) as measured by the CEMS during all test runs.

(ix) Calculate the site-specific VOC emissions limit using Equation 4 of this section:

$$VOC_{limit} = 20x\frac{C_{VOHAP,avg}}{C_{CEM}} \qquad \text{(Eq. 4)}$$

Where:

$C_{VOHAP,avg}$ = Average concentration of VOHAP for the source test in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the average concentration of TGNMO for the source test in ppmv as hexane as measured by Method 25 in 40 CFR part 60, appendix A; and

C_{CEM} = Average concentration of total hydrocarbons in ppmv as hexane as measured using the CEMS during the source test.

(3) For two or more exhaust streams from one or more automated conveyor and pallet cooling lines or automated shakeout lines, compute the flow-weighted average concentration of VOHAP emissions for each combination of exhaust streams using Equation 5 of this section:

$$C_W = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i} \qquad \text{(Eq. 5)}$$

Where:

C_W = Flow-weighted concentration of VOHAP or VOC, ppmv (as hexane);

C_i = Concentration of VOHAP or VOC from exhaust stream ‘‘i’’, ppmv (as hexane);

n = Number of exhaust streams sampled; and

Q_i = Volumetric flow rate of effluent gas from exhaust stream ‘‘i,’’, dscfm.

(g) To determine compliance with the emissions limit or standard in §63.7690(a)(11) for a TEA cold box mold or core making line, follow the test methods in 40 CFR part 60, appendix A, specified in paragraphs (g)(1) through (4) of this section.

(1) Determine the TEA concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (g)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. If you elect to meet the 99 percent reduction standard, sampling sites must be located both at the inlet to the control device and at the outlet of the control device prior to any releases to the atmosphere. If you elect to meet the concentration limit, the sampling site must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the TEA concentration. Alternatively, you may use NIOSH Method 2010 (incorporated by reference—see §63.14) to determine the TEA concentration provided the performance requirements outlined in section 13.1 of EPA Method 18 are satisfied. The sampling option and time must be sufficiently long such that either the TEA concentration in the field sample is at least 5 times the limit of detection for the analytical method or the test results calculated using the laboratory's reported analytical detection limit for the specific field samples are less than 1⁄5 of the applicable emissions limit. When using Method 18, the adsorbent tube approach, as described in section 8.2.4 of Method 18, may be required to achieve the necessary analytical detection limits. The sampling time must be at least 1 hour in all cases.

(2) If you use a wet acid scrubber, conduct the test as soon as practicable after adding fresh acid solution and the system has reached normal operating conditions.

(3) If you use a wet acid scrubber that is subject to the operating limit in §63.7690(b)(5)(ii) for pH level, determine the pH of the scrubber blowdown using the procedures in paragraph (g)(3)(i) or (ii) of this section.

(i) Measure the pH of the scrubber blowdown with the CPMS required in §63.7740(f)(2) during each TEA sampling run in intervals of no more than 15 minutes. Determine and record the 3-hour average; or

(ii) Measure and record the pH level using the probe and meter required in §63.7740(f)(2) once each sampling run. Determine and record the average pH level for the three runs.

(4) If you are subject to the 99 percent reduction standard, calculate the mass emissions reduction using Equation 6 of this section:

$$\%\text{reduction} = \frac{E_i - E_o}{E_i} x100\% \qquad \text{(Eq. 6)}$$

Where:

E_i = Mass emissions rate of TEA at control device inlet, kilograms per hour (kg/hr); and

E_o = Mass emissions rate of TEA at control device outlet, kg/hr.

(h) To determine compliance with the PM or total metal HAP emissions limits in §63.7690(a)(1) through (6) when one or more regulated emissions sources are combined with either another regulated emissions

source subject to a different emissions limit or other non-regulated emissions sources, you may demonstrate compliance using one of the procedures in paragraphs (h)(1) through (3) of this section.

(1) Meet the most stringent applicable emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(2) Use the procedures in paragraphs (h)(2)(i) through (iii) of this section.

(i) Determine the volumetric flow rate of the individual regulated streams for which emissions limits apply.

(ii) Calculate the flow-weighted average emissions limit, considering only the regulated streams, using Equation 5 of this section, except C_w is the flow-weighted average emissions limit for PM or total metal HAP in the exhaust stream, gr/dscf; and C_i is the concentration of PM or total metal HAP in exhaust stream ‘‘i’’, gr/dscf.

(iii) Meet the calculated flow-weighted average emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(3) Use the procedures in paragraphs (h)(3)(i) through (iii) of this section.

(i) Determine the PM or total metal HAP concentration of each of the regulated streams prior to the combination with other exhaust streams or control device.

(ii) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 6 of this section, except E_i is the mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr and E_o is the mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(iii) Meet the applicable emissions limit based on the calculated PM or total metal HAP concentration for the regulated emissions sources using Equation 7 of this section:

$$C_{released} = C_i x\left(1 - \frac{\%reduction}{100}\right) \qquad \text{(Eq. 7)}$$

Where:

$C_{released}$= Calculated concentration of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, gr/dscf; and

C_i= Concentration of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, gr/dscf.

(i) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time, or other situations that are not expressly considered in paragraphs (b) through (h) of this section, a site-specific test plan should be submitted to the Administrator for approval according to the requirements in § 63.7(c)(2) and (3).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, February 7, 2008]

§ 63.7733 What procedures must I use to establish operating limits?

(a) For each capture system subject to operating limits in §63.7690(b)(1)(ii), you must establish site-specific operating limits in your operation and maintenance plan according to the procedures in paragraphs (a)(1) through (3) of this section.

(1) Concurrent with applicable emissions and opacity tests, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements in §63.7740(a).

(2) For any dampers that are manually set and remain at the same position at all times the capture system is operating, the damper position must be visually checked and recorded at the beginning and end of each run.

(3) Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.

(b) For each wet scrubber subject to the operating limits in §63.7690(b)(2) for pressure drop and scrubber water flow rate, you must establish site-specific operating limits according to the procedures specified in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in §63.7740(c), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM test run.

(2) Compute and record the average pressure drop and average scrubber water flow rate for each valid sampling run in which the applicable emissions limit is met.

(c) For each combustion device applied to emissions from a scrap preheater or TEA cold box mold or core making line subject to the operating limit in §63.7690(b)(4) for combustion zone temperature, you must establish a site-specific operating limit according to the procedures specified in paragraphs (c)(1) and (2) of this section.

(1) Using the CPMS required in §63.7740(e), measure and record the combustion zone temperature during each sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average combustion zone temperature for each valid sampling run in which the applicable emissions limit is met.

(d) For each acid wet scrubber subject to the operating limit in §63.7690(b)(5), you must establish a site-specific operating limit for scrubbing liquid flow rate according to the procedures specified in paragraphs (d)(1) and (2) of this section.

(1) Using the CPMS required in §63.7740(f), measure and record the scrubbing liquid flow rate during each TEA sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average scrubbing liquid flow rate for each valid sampling run in which the applicable emissions limit is met.

(e) You may change the operating limits for a capture system, wet scrubber, acid wet scrubber, or combustion device if you meet the requirements in paragraphs (e)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your request to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in §63.7690.

(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) through (d) of this section.

(f) You may use a previous performance test (conducted since December 22, 2002) to establish an operating limit provided the test meets the requirements of this subpart.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7734 How do I demonstrate initial compliance with the emissions limitations that apply to me?

(a) You have demonstrated initial compliance with the emissions limits in §63.7690(a) by meeting the applicable conditions in paragraphs (a)(1) through (11) of this section. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.005 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.006 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0005 gr/dscf; or

(iii) The average PM mass emissions rate, determined according to the performance test procedures in §63.7732(b), did not exceed 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) The average total metal HAP mass emissions rate, determined according to the performance test procedures in §63.7732(c), did not exceed 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.001 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in §63.7732(b), did not exceed 0.010 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in §63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, the opacity of fugitive emissions from foundry operations discharged to the atmosphere, determined according to the performance test procedures in §63.7732(d), did not exceed 20 percent (6-minute average), except for one 6-minute average per hour that did not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, the average VOHAP concentration, determined according to the performance test procedures in §63.7732(e), did not exceed 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing iron and steel foundry that does not meet the work practice standards in §63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not meet the work practice standard in §63.7700(f), the average VOHAP concentration determined according to the performance test procedures in §63.7732(e), did not exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new foundry,

(i) You have reduced the data from the CEMS to 3-hour averages according to the performance test procedures in §63.7732(f)(1) or (2); and

(ii) The 3-hour flow-weighted average VOHAP concentration, measured according to the performance test procedures in §63.7332(f)(1) or (2), did not exceed 20 ppmv.

(11) For each TEA cold box mold or core making line in a new or existing iron and steel foundry, the average TEA concentration, determined according to the performance test procedures in §63.7732(g), did not exceed 1 ppmv or was reduced by 99 percent.

(b) You have demonstrated initial compliance with the operating limits in §63.7690(b) if:

(1) For each capture system subject to the operating limit in §63.7690(b)(1)(ii),

(i) You have established appropriate site-specific operating limits in your operation and maintenance plan according to the requirements in §63.7710(b); and

(ii) You have a record of the operating parameter data measured during the performance test in accordance with §63.7733(a); and

(2) For each wet scrubber subject to the operating limits in §63.7690(b)(2) for pressure drop and scrubber water flow rate, you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with §63.7733(b).

(3) For each combustion device subject to the operating limit in §63.7690(b)(3) for combustion zone temperature, you have a record of the combustion zone temperature measured during the performance test in accordance with §63.7732(e)(4).

(4) For each combustion device subject to the operating limit in §63.7690(b)(4) for combustion zone temperature, you have established appropriate site-specific operating limits and have a record of the combustion zone temperature measured during the performance test in accordance with §63.7733(c).

(5) For each acid wet scrubber subject to the operating limits in §63.7690(b)(5) for scrubbing liquid flow rate and scrubber blowdown pH,

(i) You have established appropriate site-specific operating limits for the scrubbing liquid flow rate and have a record of the scrubbing liquid flow rate measured during the performance test in accordance with §63.7733(d); and

(ii) You have a record of the pH of the scrubbing liquid blowdown measured during the performance test in accordance with §63.7732(g)(3).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7735 How do I demonstrate initial compliance with the work practice standards that apply to me?

(a) For each iron and steel foundry subject to the certification requirement in §63.7700(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that: “At all times, your foundry will purchase and use only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids.”

(b) For each iron and steel foundry subject to the requirements in §63.7700(c) for a scrap inspection and selection plan, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted a written plan to the Administrator for approval according to the requirements in §63.7700(c); and

(2) You will operate at all times according to the plan requirements.

(c) For each furan warm box mold or core making line in a new or existing foundry subject to the work practice standard in §63.7700(d), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You will meet the no methanol requirement for the catalyst portion of each binder chemical formulation; and

(2) You have records documenting your certification of compliance, such as a material safety data sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet, onsite and available for inspection.

(d) For each scrap preheater at an existing iron and steel foundry subject to the work practice standard in §63.7700(e)(1) or (2), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have installed a gas-fired preheater where the flame directly contacts the scrap charged, you will operate and maintain each gas-fired scrap preheater such that the flame directly contacts the scrap charged, and you have records documenting your certification of compliance that are onsite and available for inspection; or

(2) You will charge only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

(e) For each scrap preheater at a new iron and steel foundry subject to the work practice standard in §63.7700(f), you have demonstrated initial compliance if you have certified in your notification of compliance status that you will charge only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005]

§ 63.7736 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system subject to an operating limit in §63.7690(b), you have demonstrated initial compliance if you have met the conditions in paragraphs (a)(1) and (2) of this section.

(1) You have certified in your notification of compliance status that:

(i) You have submitted the capture system operation and maintenance plan to the Administrator for approval according to the requirements of §63.7710(b); and

(ii) You will inspect, operate, and maintain each capture system according to the procedures in the plan.

(2) You have certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan.

(b) For each control device subject to an operating limit in §63.7690(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the control device operation and maintenance plan to the Administrator for approval according to the requirements of §63.7710(b); and

(2) You will inspect, operate, and maintain each control device according to the procedures in the plan.

(c) For each bag leak detection system, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the bag leak detection system monitoring information to the Administrator within the written O&M plan for approval according to the requirements of §63.7710(b);

(2) You will inspect, operate, and maintain each bag leak detection system according to the procedures in the plan; and

(3) You will follow the corrective action procedures for bag leak detection system alarms according to the requirements in the plan.

(d) For each pouring area and pouring station in a new or existing foundry, you have demonstrated initial compliance if you have certified in your notification of compliance status report that:

(1) You have submitted the mold vent ignition plan to the Administrator for approval according to the requirements in §63.7710(b); and

(2) You will follow the procedures for igniting mold vent gases according to the requirements in the plan.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

Continuous Compliance Requirements

§ 63.7740 What are my monitoring requirements?

(a) For each capture system subject to an operating limit in §63.7690(b)(1), you must install, operate, and maintain a CPMS according to the requirements in §63.7741(a) and the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you use a flow measurement device to monitor the operating limit parameter, you must at all times monitor the hourly average rate (e.g., the hourly average actual volumetric flow rate through each separately ducted hood or the average hourly total volumetric flow rate at the inlet to the control device).

(2) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must at all times monitor the relative change in PM loadings using a bag leak detection system according to the requirements in § 63.7741(b).

(c) For each baghouse, regardless of type, that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must conduct inspections at their specified frequencies according to the requirements specified in paragraphs (c)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulse-jet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspections or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or lying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(d) For each wet scrubber subject to the operating limits in §63.7690(b)(2), you must at all times monitor the 3-hour average pressure drop and scrubber water flow rate using CPMS according to the requirements in §63.7741(c).

(e) For each combustion device subject to the operating limit in §63.7690(b)(3), you must at all times monitor the 15-minute average combustion zone temperature using a CPMS according to the requirements of §63.7741(d).

(f) For each combustion device subject to the operating limit in §63.7690(b)(4), you must at all times monitor the 3-hour average combustion zone temperature using CPMS according to the requirements in §63.7741(d).

(g) For each wet acid scrubber subject to the operating limits in §63.7690(b)(5),

(1) You must at all times monitor the 3-hour average scrubbing liquid flow rate using CPMS according to the requirements of §63.7741(e)(1); and

(2) You must at all times monitor the 3-hour average pH of the scrubber blowdown using CPMS according to the requirements in §63.7741(e)(2) or measure and record the pH of the scrubber blowdown once per production cycle using a pH probe and meter according to the requirements in §63.7741(e)(3).

(h) For one or more automated conveyor and pallet cooling lines and automated shakeout lines at a new iron and steel foundry subject to the VOHAP emissions limit in §63.7690(a)(10), you must at all times monitor the 3-hour average VOHAP concentration using a CEMS according to the requirements of §63.7741(g).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7741 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each capture system subject to an operating limit in §63.7690(b)(1), you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a)(1) through (3) of this section.

(1) If you use a flow measurement device to monitor an operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(1)(i) through (iv) of this section.

(i) Locate the flow sensor and other necessary equipment such as straightening vanes in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) If you use a pressure measurement device to monitor the operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(2)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close as possible to a position that provides a representative measurement of the pressure and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a ‘‘non-clogging’’ pressure tap is used, check for pluggage monthly.

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) Record the results of each inspection, calibration, and validation check.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (b)(1) through (7) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).

(3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(4) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).

(5) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time without approval from the Administrator. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the operation and maintenance plan required by §63.7710(b).

(6) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) For each wet scrubber subject to the operating limits in §63.7690(b)(2), you must install and maintain CPMS to measure and record the pressure drop and scrubber water flow rate according to the requirements in paragraphs (c)(1) and (2) of this section.

(1) For each CPMS for pressure drop you must:

(i) Locate the pressure sensor in or as close as possible to a position that provides a representative measurement of the pressure drop and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a ‘‘non-clogging’’ pressure tap is used, check for pluggage monthly

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) For each CPMS for scrubber liquid flow rate, you must:

(i) Locate the flow sensor and other necessary equipment in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually according to the manufacturer's instructions.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(d) For each combustion device subject to the operating limit in §63.7690(b)(3) or (4), you must install and maintain a CPMS to measure and record the combustion zone temperature according to the requirements in paragraphs (d)(1) through (8) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) For a noncryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 0.75 percent of the temperature value, whichever is larger.

(3) For a cryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 2 percent of the temperature value, whichever is larger.

(4) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(5) If you use a chart recorder, it must have a sensitivity in the minor division of at least 20 °F.

(6) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check, in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 16.7 °C of the process temperature sensor's reading.

(7) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range, or install a new temperature sensor.

(8) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(e) For each wet acid scrubber subject to the operating limits in §63.7690(b)(5), you must:

(1) Install and maintain CPMS to measure and record the scrubbing liquid flow rate according to the requirements in paragraph (c)(2) of this section; and

(2) Install and maintain CPMS to measure and record the pH of the scrubber blowdown according to the requirements in paragraph (e)(2)(i) through (iv) of this section.

(i) Locate the pH sensor in a position that provides a representative measurement of the pH and that minimizes or eliminates internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.1 pH or a transducer with a minimum measurement sensitivity of 5 percent of the pH range.

(iii) Check gauge calibration quarterly and transducer calibration monthly using a manual pH gauge.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) As an alternative to the CPMS required in paragraph (e)(2) of this section, you may use a pH probe to extract a sample for analysis by a pH meter that meets the requirements in paragraphs (e)(3)(i) through (iii) of this section.

(i) The pH meter must have a range of at least 1 to 5 or more;

(ii) The pH meter must have an accuracy of ±0.1; and

(iii) The pH meter must have a resolution of at least 0.1 pH.

(f) You must operate each CPMS used to meet the requirements of this subpart according to the requirements specified in paragraphs (f)(1) through (3) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of three of the required four data points to constitute a valid hour of data.

(2) Each CPMS must have valid hourly data for 100 percent of every averaging period.

(3) Each CPMS must determine and record the hourly average of all recorded readings and the 3-hour average of all recorded readings.

(g) For each automated conveyor and pallet cooling line and automated shakeout line at a new iron and steel foundry subject to the VOHAP emissions limit in §63.7690(a)(10), you must install, operate, and maintain a CEMS to measure and record the concentration of VOHAP emissions according to the requirements in paragraphs (g)(1) through (3) of this section.

(1) You must install, operate, and maintain each CEMS according to Performance Specification 8 in 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each CEMS according to the requirements of §63.8 and Performance Specification 8 in 40 CFR part 60, appendix B.

(3) You must operate each CEMS according to the requirements specified in paragraph (g)(3)(i) through (iv) of this section.

(i) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(ii) You must reduce CEMS data as specified in §63.8(g)(2).

(iii) Each CEMS must determine and record the 3-hour average emissions using all the hourly averages collected for periods during which the CEMS is not out-of-control.

(iv) Record the results of each inspection, calibration, and validation check.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7742 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) any time a source of emissions is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emissions or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

§ 63.7743 How do I demonstrate continuous compliance with the emissions limitations that apply to me?

(a) You must demonstrate continuous compliance by meeting the applicable conditions in paragraphs (a)(1) through (12) of this section. When alternative emissions limitations are provided for a given emissions source, you must comply with the alternative emissions limitation most recently selected as your compliance alternative.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.005 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.006 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0005 gr/dscf; or

(iii) Maintaining the average PM mass emissions rate at or below 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) Maintaining the average total metal HAP mass emissions rate at or below 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at new iron and steel foundry, (i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.001 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.010 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, maintaining the opacity of any fugitive emissions from foundry operations discharged to the atmosphere at or below 20 percent opacity (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing new iron and steel foundry that does not comply with the work practice standard in §63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not comply with the work practice standard in §63.7700(f), maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines or automated shakeout lines that use a sand mold system at a new iron and steel foundry,

(i) Maintaining the 3-hour flow-weighted average VOHAP concentration in the exhaust stream at or below 20 ppmv;

(ii) Inspecting and maintaining each CEMS according to the requirements of §63.7741(g) and recording all information needed to document conformance with these requirements; and

(iii) Collecting and reducing monitoring data for according to the requirements of §63.7741(g) and recording all information needed to document conformance with these requirements.

(11) For each TEA cold box mold or core making line at a new or existing iron and steel foundry, maintaining a 99 percent reduction in the VOHAP concentration in the exhaust stream or maintaining the average VOHAP concentration in the exhaust stream at or below 1 ppmv.

(12) Conducting subsequent performance tests at least every 5 years for each emissions source subject to an emissions limit for PM, total metal HAP, VOHAP, or TEA in §63.7690(a) and subsequent performance tests at least every 6 months for each building or structure subject to the opacity limit in §63.7690(a)(7).

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in §63.7690(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(1) Operating the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitoring the capture system according to the requirements in §63.7740(a) and collecting, reducing, and recording the monitoring data for each of the operating limit parameters according to the applicable requirements in this subpart.

(c) For each baghouse,

(1) Inspecting and maintaining each baghouse according to the requirements of §63.7740(c)(1) through (8) and recording all information needed to document conformance with these requirements; and

(2) If the baghouse is equipped with a bag leak detection system, maintaining records of the times the bag leak detection system sounded, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(d) For each wet scrubber that is subject to the operating limits in §63.7690(b)(2), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average pressure drop and 3-hour average scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of §63.7741(c) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements.

(e) For each combustion device that is subject to the operating limit in §63.7690(b)(3), you must demonstrate continuous compliance by:

(1) Maintaining the 15-minute average combustion zone temperature at a level no lower than 1,300 °F;

(2) Inspecting and maintaining each CPMS according to the requirements of §63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements.

(f) For each combustion device that is subject to the operating limit in §63.7690(b)(4), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average combustion zone temperature at a level no lower that established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of §63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements.

(g) For each acid wet scrubber subject to the operating limits in §63.7690(b)(5), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average scrubbing liquid flow rate at a level no lower than the level established during the initial or subsequent performance test;

(2) Maintaining the 3-hour average pH of the scrubber blowdown at a level no higher than 4.5 (if measured by a CPMS) or maintaining the pH level of the scrubber blowdown during each production shift no higher than 4.5;

(3) Inspecting and maintaining each CPMS according to the requirements of §63.7741(e) and recording all information needed to document conformance with these requirements; and

(4) Collecting and reducing monitoring data for scrubbing liquid flow rate and scrubber blowdown pH according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements. If the pH level of the scrubber blowdown is measured by a probe and meter, you must demonstrate continuous compliance by maintaining records that document the date, time, and results of each sample taken for each production shift.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, February 7, 2008]

§ 63.7744 How do I demonstrate continuous compliance with the work practice standards that apply to me?

(a) You must maintain records that document continuous compliance with the certification requirements in §63.7700(b) or with the procedures in your scrap selection and inspection plan required in §63.7700(c). Your records documenting compliance with the scrap selection and inspection plan must include a copy (kept onsite) of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.

(b) You must keep records of the chemical composition of all catalyst binder formulations applied in each furan warm box mold or core making line at a new or existing iron and steel foundry to demonstrate continuous compliance with the requirements in §63.7700(d).

(c) For a scrap preheater at an existing iron and steel foundry, you must operate and maintain each gas-fired preheater such that the flame directly contacts the scrap charged to demonstrate continuous compliance with the requirement §63.7700(e)(1). If you choose to meet the work practice standard in §63.7700(e)(2), you must keep records to document that the scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b).

(d) For a scrap preheater at a new iron and steel foundry, you must keep records to document that each scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b) to demonstrate continuous compliance with the requirement in §63.7700(f).

§ 63.7745 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system and control device for an emissions source subject to an emissions limit in §63.7690(a), you must demonstrate continuous compliance with the operation and maintenance requirements of §63.7710 by:

(1) Making monthly inspections of capture systems and initiating corrective action according to §63.7710(b)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance for each control device according to the preventive maintenance plan required by §63.7710(b)(3) and recording all information needed to document conformance with these requirements;

(3) Operating and maintaining each bag leak detection system according to the site-specific monitoring plan required by §63.7710(b)(4) and recording all information needed to demonstrate conformance with these requirements;

(4) Initiating and completing corrective action for a bag leak detection system alarm according to the corrective action plan required by §63.7710(b)(5) and recording all information needed to document conformance with these requirements; and

(5) Igniting gases from mold vents according to the procedures in the plan required by §63.7710(b)(6). (Any instance where you fail to follow the procedures is a deviation that must be included in your semiannual compliance report.)

(b) You must maintain a current copy of the operation and maintenance plans required by §63.7710(b) onsite and available for inspection upon request. You must keep the plans for the life of the iron and steel foundry or until the iron and steel foundry is no longer subject to the requirements of this subpart.

§ 63.7746 What other requirements must I meet to demonstrate continuous compliance?

(a) Deviations. You must report each instance in which you did not meet each emissions limitation in §63.7690 (including each operating limit) that applies to you. This requirement includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet each work practice standard in §63.7700 and each operation and maintenance requirement of §63.7710 that applies to you. These instances are deviations from the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements of §63.7751.

(b) Startups, shutdowns, and malfunctions. (1) Consistent with the requirements of §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations according to the provisions in §63.6(e).

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

§ 63.7747 How do I apply for alternative monitoring requirements for a continuous emissions monitoring system?

(a) You may request an alternative monitoring method to demonstrate compliance with the VOHAP emissions limits in §63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines at a new iron and steel foundry according to the procedures in this section.

(b) You can request approval to use an alternative monitoring method in the notification of construction or reconstruction for new sources, or at any time.

(c) You must submit a monitoring plan that includes a description of the control technique or pollution prevention technique, a description of the continuous monitoring system or method including appropriate operating parameters that will be monitored, test results demonstrating compliance with the emissions limit, operating limit(s) (if applicable) determined according to the test results, and the frequency of measuring and recording to establish continuous compliance. If applicable, you must also include operation and maintenance requirements for the monitors.

(d) The monitoring plan is subject to approval by the Administrator. Use of the alternative monitoring method must not begin until approval is granted by the Administrator.

Notifications, Reports, and Records

§ 63.7750 What notifications must I submit and when?

(a) You must submit all of the notifications required by §§63.6(h)(4) and (5), 63.7(b) and (c); 63.8(e); 63.8(f)(4) and (6); 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in §63.9(b)(2), if you start up your iron and steel foundry before April 22, 2004, you must submit your initial notification no later than August 20, 2004.

(c) If you start up your new iron and steel foundry on or after April 22, 2004, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required by §63.7(b)(1).

(e) If you are required to conduct a performance test or other initial compliance demonstration, you must submit a notification of compliance status according to the requirements of §63.9(h)(2)(ii). For opacity performance tests, the notification of compliance status may be submitted with the semiannual compliance report in §63.7751(a) and (b) or the semiannual part 70 monitoring report in § 63.7551(d).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to the requirement specified in §63.10(d)(2).

§ 63.7751 What reports must I submit and when?

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements specified in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your iron and steel foundry by §63.7683 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your iron and steel foundry.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(5) For each iron and steel foundry that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of the dates specified in paragraphs (a)(1) through (4) of this section.

(b) Compliance report contents. Each compliance report must include the information specified in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took action consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there were no deviations from any emissions limitations (including operating limit), work practice standards, or operation and maintenance requirements, a statement that there were no deviations from the emissions limitations, work practice standards, or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including a CPMS or CEMS) was out-of-control as specified by §63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.

(7) For each deviation from an emissions limitation (including an operating limit) that occurs at an iron and steel foundry for which you are not using a continuous monitoring system (including a CPMS or CEMS) to comply with an emissions limitation or work practice standard required in this subpart, the compliance report must contain the information specified in paragraphs (b)(1) through (4) and (b)(7)(i) and (ii) of this section. This requirement includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each emissions source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause) as applicable and the corrective action taken.

(8) For each deviation from an emissions limitation (including an operating limit) or work practice standard occurring at an iron and steel foundry where you are using a continuous monitoring system (including a CPMS or CEMS) to comply with the emissions limitation or work practice standard in this subpart, you must include the information specified in paragraphs (b)(1) through (4) and (b)(8)(i) through (xi) of this section. This requirement includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system was out-of-control, including the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan and the source exceeds any applicable emissions limitation in § 63.7690, you must submit an immediate startup, shutdown, and malfunction report according to the requirements of §63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an iron and steel foundry pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an iron and steel foundry along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emissions limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an iron and steel foundry to your permitting authority.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, February 7, 2008]

§ 63.7752 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (4) of this section:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements of §63.10(b)(2)(xiv).

(2) The records specified in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required by §63.10(b)(2)(viii).

(4) Records of the annual quantity of each chemical binder or coating material used to coat or make molds and cores, the Material Data Safety Sheet or other documentation that provides the chemical composition of each component, and the annual quantity of HAP used in these chemical binder or coating materials at the foundry as calculated from the recorded quantities and chemical compositions (from Material Data Safety Sheets or other documentation).

(b) You must keep the following records for each CEMS.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Request for alternatives to relative accuracy tests for CEMS as required in §63.8(f)(6)(i).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required by §§63.7743, 63.7744, and 63.7745 to show continuous compliance with each emissions limitation, work practice standard, and operation and maintenance requirement that applies to you.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, February 7, 2008]

§ 63.7753 In what form and for how long must I keep my records?

(a) You must keep your records in a form suitable and readily available for expeditious review, according to the requirements of §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to the requirements in §63.10(b)(1). You can keep the records for the previous 3 years offsite.

Other Requirements and Information

§ 63.7760 What parts of the General Provisions apply to me?

Table 1 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.7761 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to non-opacity emissions limitations in §63.7690 and work practice standards in §63.7700 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

Definitions

§ 63.7765 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA), in §63.2, and in this section.

Automated conveyor and pallet cooling line means any dedicated conveyor line or area used for cooling molds received from pouring stations.

Automated shakeout line means any mechanical process unit designed for and dedicated to separating a casting from a mold. These mechanical processes include, but are not limited to, shaker decks, rotary separators, and high-frequency vibration units. Automated shakeout lines do not include manual processes for separating a casting from a mold, such as personnel using a hammer, chisel, pick ax, sledge hammer, or jackhammer.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Binder chemical means a component of a system of chemicals used to bind sand together into molds, mold sections, and cores through chemical reaction as opposed to pressure.

Capture system means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

Cold box mold or core making line means a mold or core making line in which the formed aggregate is hardened by catalysis with a gas.

Combustion device means an afterburner, thermal incinerator, or scrap preheater.

Conveyance means the system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. A conveyance may, but does not necessarily include, control equipment designed to reduce emissions of the pollutants. Emissions that are released through windows, vents, or other general building ventilation or exhaust systems are not considered to be discharged through a conveyance.

Cooling means the process of molten metal solidification within the mold and subsequent temperature reduction prior to shakeout.

Cupola means a vertical cylindrical shaft furnace that uses coke and forms of iron and steel such as scrap and foundry returns as the primary charge components and melts the iron and steel through combustion of the coke by a forced upward flow of heated air.

Deviation means any instance in which an affected source or an owner or operator of such an affected source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), work practice standard, or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any iron and steel foundry required to obtain such a permit; or

(3) Fails to meet any emissions limitation (including operating limits) or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

Electric arc furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted through resistance heating by an electric current flowing through the arcs formed between the electrodes and the surface of the metal and also flowing through the metal between the arc paths.

Electric induction furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted though resistance heating by an electric current that is induced in the metal by passing an alternating current through a coil surrounding the metal charge or surrounding a pool of molten metal at the bottom of the vessel.

Emissions limitation means any emissions limit or operating limit.

Exhaust stream means gases emitted from a process through a conveyance as defined in this subpart.

Free organic liquids means material that fails the paint filter test by EPA Method 9095A (incorporated by reference—see §63.14). That is, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains free liquids.

Fresh acid solution means a sulfuric acid solution used for the control of triethylamine emissions that has a pH of 2.0 or less.

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a conveyance as defined in this subpart.

Furan warm box mold or core making line means a mold or core making line in which the binder chemical system used is that system commonly designated as a furan warm box system by the foundry industry.

Hazardous air pollutant means any substance on the list originally established in 112(b)(1) of the CAA and subsequently amended as published in the Code of Federal Regulations.

Iron and steel foundry means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities and operations that only produce non-commercial castings are not included in this definition.

Metal melting furnace means a cupola, electric arc furnace, or electric induction furnace that converts scrap, foundry returns, and/or other solid forms of iron and/or steel to a liquid state. This definition does not include a holding furnace, an argon oxygen decarburization vessel, or ladle that receives molten metal from a metal melting furnace, to which metal ingots or other material may be added to adjust the metal chemistry.

Mold or core making line means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape, and harden the formed aggregate. This definition does not include a line for making green sand molds or cores.

Mold vent means an intentional opening in a mold through which gases containing pyrolysis products of organic mold and core constituents produced by contact with or proximity to molten metal normally escape the mold during and after metal pouring.

Off blast means those periods of cupola operation when the cupola is not actively being used to produce molten metal. Off blast conditions include cupola startup when air is introduced to the cupola to preheat the sand bed and other cupola startup procedures as defined in the startup, shutdown, and malfunction plan. Off blast conditions also include idling conditions when the blast air is turned off or down to the point that the cupola does not produce additional molten metal.

On blast means those periods of cupola operation when combustion (blast) air is introduced to the cupola furnace and the furnace is capable of producing molten metal. On blast conditions are characterized by both blast air introduction and molten metal production.

Pouring area means an area, generally associated with floor and pit molding operations, in which molten metal is brought to each individual mold. Pouring areas include all pouring operations that do not meet the definition of a pouring station.

Pouring station means the fixed location to which molds are brought in a continuous or semicontinuous manner to receive molten metal, after which the molds are moved to a cooling area.

Responsible official means responsible official as defined in §63.2.

Scrap preheater means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

Scrubber blowdown means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH before being returned to the scrubber.

Total metal HAP means, for the purposes of this subpart, the sum of the concentrations of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A). Only the measured concentration of the listed analytes that are present at concentrations exceeding one-half the quantitation limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantitation limit of the analytical method, the concentration of those analytes will be assumed to be zero for the purposes of calculating the total metal HAP for this subpart.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7222, February 7, 2008]

Table 1 to Subpart EEEEE of Part 63—Applicability of General Provisions to Subpart EEEEE

[As stated in §63.7760, you must meet each requirement in the following table that applies to you.]

Citation	Subject	Applies to Subpart EEEEE?	Explanation
63.1	Applicability	Yes	
63.2	Definitions	Yes	
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities	Yes	
63.5	Construction/reconstruction	Yes	
63.6(a)–(g)	Compliance with standards and maintenance requirements	Yes	
63.6(h)	Opacity and visible emissions standards	Yes	
63.6(i)–(j)	Compliance extension and Presidential compliance exemption	Yes	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	Subpart EEEEE specifies applicability and performance test dates.
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes	
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e),	Monitoring requirements	Yes	Subpart EEEEE specifies requirements for alternative monitoring systems.

(f)(1)–(f)(6), (g)(1)–(g)(4)			
63.8(a)(4)	Additional monitoring requirements for control devices in §63.11	No	Subpart EEEEE does not require flares.
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No	Subpart EEEEE specifies requirements for operation of CMS and CEMS.
63.8(c)(5)	Continuous opacity monitoring system (COMS) Minimum Procedures	No	Subpart EEEEE does not require COMS.
63.8(g)(5)	Data reduction	No	Subpart EEEEE specifies data reduction requirements.
63.9	Notification requirements	Yes	Except: for opacity performance tests, Subpart EEEEE allows the notification of compliance status to be submitted with the semiannual compliance report or the semiannual part 70 monitoring report.
63.10(a)–(b), (c)(1)–(6), (c)(9)–(15), (d)(1)–(2), (e)(1)–(2), (f)	Recordkeeping and reporting requirements	Yes	Additional records for CMS in §63.10(c)(1)–(6), (9)–(15) apply only to CEMS.
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for CMS	No	Subpart EEEEE specifies records requirements.
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes	
63.10(e)(3)	Excess emissions reports	No	Subpart EEEEE specifies reporting requirements.
63.10(e)(4)	Reporting COMS data	No	Subpart EEEEE data does not require COMS.
63.11	Control device requirements	No	Subpart EEEEE does not require flares.
63.12	State authority and delegations	Yes	
63.13–63.15	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality	Yes	

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7223, February 7, 2008]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (TSD)
for a Part 70 Significant Source Modification and
a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Rochester Metal Products Corp.
Source Location:	616 Indiana Avenue, Rochester, Indiana 46975
County:	Fulton
SIC Code:	3321
Operation Permit No.:	T 049-5999-00002
Operation Permit Issuance Date:	December 22, 2006
Significant Source Modification No.:	049-24381-00002
Significant Permit Modification No.:	049-24477-00002
Permit Reviewer:	Kimberly Cottrell

Public Notice Information

On December 15, 2010, the Office of Air Quality (OAQ) had a notice published in Rochester Sentinel in Rochester, Indiana, stating that the Rochester Metal Products Corp. (RMP) had applied for a significant modification to their Part 70 Operating Permit issued on December 22, 2006, fulfill the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) that apply to the Disa 1 and Disa 2 processes including the melt operations. The notice also stated that OAQ proposed to issue a permit for this operation 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.

RMP Comments and IDEM's Responses

On January 12, 2010, OAQ received comments from Tom Rarick, on behalf of Rochester Metal Products Corp. (RMP). The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Company Comment 1:

D.2.1(e) was been added and modified somewhat from the draft version. Instead of referencing 25 tpy and State BACT, it now references 40 tpy and PSD. The condition should refer to the limits in "(a) and (c) above" rather than "(a) and (b) above". The paragraph also references Condition D.7.1 which are the VOC limits for the core wash, which doesn't make sense. RMP believes the intended reference would be to D.5.1, which has the limits on VOCs from the Disa 1 and 2 pouring cooling shakeout processes. RMP requests that IDEM modify the condition to read as follows:

Compliance with the limits in (a) and ~~(b)~~ **(c)** above combined with the limits in Condition ~~D.7.1~~ **D.5.1** will limit the VOC emissions from Disa 1 and Disa 2 to less that forty (40) tons per year and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

IDEM Response 1:

IDEM has updated Condition D.2.1 as follows:

D.2.1 CO and VOC PSD Minor Limits [326 IAC 2-2]

(a) The total natural gas usage for the entire source shall not exceed 150 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) CO emissions shall not exceed 84 pounds per million cubic feet of natural gas.

(c) VOC emissions shall not exceed 5.5 pounds per million cubic feet of natural gas.

(d) Compliance with the limits in (a) and (b) above **combined with the limits in Condition D.3.3** will limit the CO emissions from all facilities constructed prior to 1996 to less that one hundred (100) tons per year and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996 **for CO**.

(e) Compliance with the limits in (a) and ~~(b)~~ **(c)** above combined with the limits in ~~Condition D.7.1~~ **Conditions D.4.1, D.5.1 and D.6.1** will limit the VOC emissions from Disa 1 and Disa 2 to less that forty (40) tons per year and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) - (g) ...

(h) Compliance with (a), (b), and (c) above combined with the limits in Conditions **D.2.1,** D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) - (d) ...

(e) Compliance with (b) and (c) above combined with the limits in Conditions **D.2.1,** D.4.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.6.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) - (d) ...

(e) Compliance with (b) and (c) above combined with the limits in Conditions **D.2.1,** D.4.1 and D.5.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

Company Comment 2:

Condition D.7.1 VOC limits for the core wash. The second paragraph references condition D.3.3 which contains CO limits for the Hunter line. This reference doesn't make sense. RMP suspects the intent was to reference D.2.1, but that also does not make sense. RMP believes the correct way to handle would be to modify to read as follows:

> Compliance with these limits ~~combined with the limits in Condition D.3.3~~ shall limit the potential to emit VOC from the core wash operation (EU-503), to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the core wash operation (EU-503).

IDEM Response 2:

IDEM has updated Condition D.7.1 as follows:

D.7.1 ~~Volatile Organic Compounds (VOC)~~ **VOC BACT and PSD Minor Limits** [326 IAC 8-1-6] **[326 IAC 2-2]**

(a) VOC delivered to the core wash operation (EU-503) shall be less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Compliance with ~~these limits~~ **this limit** ~~combined with the limits in Condition D.3.3~~ shall limit the potential to emit VOC from the core wash operation (EU-503), to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the core wash operation (EU-503).

(c) Compliance with this limit combined with the limits in Conditions D.2.1 and D.3.4 shall limit the potential to emit VOC from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

Company Comment 3:

Page 72 of 94, Condition E.1.2(l): change "anf" to "and".

IDEM Response 3:

This change had been made.

Company Comment 4:

Page 92 of 94, reporting form: Eliminate reference to DMEA.

IDEM Response 4:

This change had been made.

Other Changes

Upon further review, the OAQ has decided to make the following revisions to the permit:

Change No. 1:

After consideration of the above comments, IDEM has corrected the Emission limits contained in Conditions D.3.3 and D.3.4 to clarify that these limits, along with the limits in D.2.1 and D.7.1 combined are intended to limit the total emissions of all emission units constructed prior to 1996 to less than 100 tons per year for both VOC and CO.

D.3.3 CO PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall each not exceed 45,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total CO emissions from the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall not exceed 4.15 pounds of per ton of metal throughput.

Compliance with these limits **combined with the limits in Condition D.2.1** shall limit the potential to emit CO from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of CO, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.3.4 ~~Volatile Organic Compounds (VOC) [326 IAC 8-1-6]~~ **VOC BACT Minor Limit** [326 IAC 2-2]

(a) The total throughput of metal to the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall be less than 45,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The throughput of metal to Hunter Line No. 4 of the Hunter pouring cooling process (EU-313) shall be less than 36,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total VOC emissions from the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall not exceed 1.34 pounds per ton of metal.

Compliance with the limits in paragraphs (a) through (c) above combined with the limits in ~~Condition~~ **Conditions D.2.1 and** D.7.1 shall limit the potential to emit VOC from the facilities constructed prior to 1996, to less than ~~twenty-five (25)~~ **one hundred (100)** tons per year of VOC, and shall render the requirements of ~~326 IAC 8-1-6 and~~ 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

Change No. 2:

IDEM has updated the following condition titles to clarify that these limits are intended to limit VOC to less than the thresholds that would require BACT analyses under both 326 IAC 8-1-6 and 326 IAC 2-2:

D.4.1 ~~Volatile Organic Compounds (VOC)~~ **VOC BACT and PSD Minor Limits** [326 IAC 8-1-6] [326 IAC 2-2]

D.5.1 ~~Volatile Organic Compounds (VOC)~~ **VOC BACT and PSD Minor Limits** [326 IAC 8-1-6] [326 IAC 2-2]

D.6.1 ~~Volatile Organic Compounds (VOC)~~ **VOC BACT and PSD Minor Limits** [326 IAC 8-1-6] [326 IAC 2-2]

D.8.1 VOC **BACT and** PSD Minor Limits [326 IAC 2-2] [326 IAC 8-1-6]

The IDEM does not amend the Technical Support Document (TSD). The TSD is maintained to document the original review. This addendum to the TSD is used to document comments, responses to comments and changes made from the time the permit was drafted until a final decision is made.

IDEM Contact

Questions regarding this proposed permit can be directed to:

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Office of Air Quality
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Please refer to Significant Source Modification No. SSM 049-24381-00002 and Significant Permit Modification No. SPM 049-24477-00002 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Part 70 Significant Source Modification and
a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Rochester Metal Products Corp.
Source Location:	616 Indiana Avenue, Rochester, Indiana 46975
County:	Fulton
SIC Code:	3321
Operation Permit No.:	T 049-5999-00002
Operation Permit Issuance Date:	December 22, 2006
Significant Source Modification No.:	049-24381-00002
Significant Permit Modification No.:	049-24477-00002
Permit Reviewer:	Kimberly Cottrell

Existing Approvals

The source was issued Part 70 Operating Permit No. T 049-5999-00002 on December 22, 2006. The source has since received the following approvals:

(a) Significant Source Modification No. 049-23878-00002, issued on March 9, 2007;

(b) Significant Permit Modification No. 049-24044-00002, issued on April 3, 2007; and

(c) Exemption No. 049-27541-00002, issued on March 2, 2009.

(d) Minor Source Modification No. 049-28063-00002, issued on July 30, 2009.

(e) Significant Permit Modification No. 049-28067-00002, issued on September 24, 2009.

(f) Administrative Amendment No. 049-28781-00002, issued on November 19, 2009.

County Attainment Status

The source is located in Fulton County.

Table 1: County Attainment Status

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005.
NO_2	Cannot be classified or better than national standards.

Table 1: County Attainment Status	
Pollutant	**Designation**
Pb	Not designated.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_X) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_X emissions are considered when evaluating the rule applicability relating to ozone. Fulton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(b) $PM_{2.5}$
Fulton County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions until 326 IAC 2-2 is revised.

(c) Fulton County has been classified as attainment or unclassifiable for PM_{10}, SO_2, NO_2, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(e) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Table 2: Source Status PTE	
Pollutant	**Emissions** (ton/yr)
CO	>100
NO_X	<100
PM	>100
PM_{10}	>100
$PM_{2.5}$	>100
SO_2	<100
VOC	>100

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) These emissions are based upon Significant Permit Modification No. SPM 049-24044-00002, issued on April 3, 2007 and Part 70 Operating Permit No. T 049-5999-00002, issued on December 22, 2006.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Table 3: Source Status HAP PTE

HAPs	**Emissions** (ton/yr)
Chromium Compounds	<10
Cobalt Compounds	<10
Nickel Compounds	<10
Arsenic Compounds	<10
Cadmium Compounds	<10
Selenium Compounds	<10
Lead Compounds	<10
Manganese Compounds	**>10**
Benzene	<10
Phenol	<10
Toluene	<10
Hexane	<10
TOTAL	**>25**

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because uncontrolled HAP emissions of manganese are greater than ten (10) tons per year and uncontrolled total HAP emissions are greater than twenty-five (25) tons per year. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Rochester Metal Products Corp. on February 28, 2007, to fulfill the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) that apply to the Disa 1 and Disa 2 processes including the melt operations. Rochester Metal Products Corp. was required to submit a PSD application pursuant to conditions D.2.1 and D.2.2 of their Part 70 Permit No. T 049-5999-00002, issued on December 22, 2006, for all of the emission units in the Disa 1 and Disa 2 processes, including the melt operations, for CO and PM/PM_{10} emissions.

The following emission units and pollution control devices were evaluated to determine Best Available Control Technology (BACT) under the PSD rules:

Melt Operations, consisting of the following:

(a) Two (2) natural gas-fired preheaters (No. 1 and No. 2) and a charge handling system, identified as EU-118, modified in 1996, No. 2 preheater approved for construction in 2007, controlled by baghouse DC-9, rated at 7 and 14 million British thermal units per hour for No. 1 and No. 2 preheaters, respectively, exhausted to Stack DC-9, preheater capacities: 13 and 21 tons of metal, respectively, charge system capacity: 34 tons of metal per hour total.

(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.

Disa 1 Processes, consisting of the following:

(a) One (1) Disa 1/Disa 2 sand system, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 60 tons of sand per hour.

(b)(1) Prior to construction of Stack D-333C:
One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(c)(2) After construction of Stack D-333C:
One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(d) One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled by baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(e) One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6 and DC-8, exhausted to Stack DC-6/7 and exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(f) One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(g) One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

Disa 2 Processes, consisting of the following:

(a) One (1) Disa 2 sand muller, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 60 tons of sand per hour.

(b)(1) Prior to construction of Stack D-333C:
One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(c)(2) After construction of Stack D-333C:
One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(d) One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(e) One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(f) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(g) One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

Disa Storage Silos

(a) One (1) Disa core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30 tons of core sand and 0.85 tons of core sand per hour.

(b) One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, constructed in 1996, controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.

(c) One (1) Disa New Sand Day Bin, identified as EU-DNS, constructed in 1996, controlled by a bin vent, internally vented, capacity: 10 tons of sand and 66 tons of sand per hour.

Magnesium Treatment System

(a) One (1) Hunter magnesium treatment system, identified as EU-120, permitted in 2009, controlled by baghouse DC-10, exhausted internally, nominal capacity: 10.3 tons of metal per hour.

(b) One (1) Disa magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.

The following emission units and pollution control devices were evaluated as part of the air quality analysis for the PSD BACT evaluation:

Melt Operations, consisting of the following:

(a) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3, 3, and 7 tons of metal per hour, respectively, 13 tons of metal per hour total.

Hunter Casting Processes, consisting of the following:

(a) One (1) Hunter sand system, identified as EU-311, commenced construction in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(b) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979 and modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(c) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

Hunter Storage Silos

(a) One (1) Hunter core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54 tons of core sand.

(b) One (1) Hunter sand storage silo, identified as EU-203, constructed in 1980, controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

This modification does not result in any change in the potential to emit before controls of any of the emission units listed above. The source will continue to comply with the existing emission limits and will also comply with the additional emission limits that will be included in the Part 70 permit to comply with 326 IAC 2-2 (PSD) as applicable. See the State Rule Applicability – Entire Source section below for applicable limits pursuant to 326 IAC 2-2 (PSD).

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

There are no new or modified stacks due to this modification.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, IDEM, or the appropriate local air pollution control agency."

This modification does not result in any change in the potential to emit before controls of any of the affected emission units associated with this modification.

This source modification is subject to 326 IAC 2-7-10.5 (f)(1) because the uncontrolled PM, PM_{10} and CO emissions from the units included in this modification listed above installed after 1996 at an existing minor PSD source are each greater than 100 tons per year making it a modification that is subject to 326 IAC 2-2 (PSD). Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12 (d), because it requires a case-by-case determination of an emission limitation and therefore, does not qualify for a minor permit modification.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Table 4: Potential to Emit (ton/yr)					
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC**
NG preheaters (No.1 & No.2); charge handling (EU-118); EIFs 4 & 5 (EU-114 & EU-115) [baghouse DC-9]	7.73	9.20	4.29	2.00	0.06	0.51
EIFs (EU-131, EU-132 & EU-133) [baghouse DC-13]	--	--	3.01	1.21	--	--
Disa 1/Disa 2 sand systems (EU-321) & Casting Cooling (EU-325) [baghouse DC-6] Disa 1 Shakeout (EU-324) [baghouse DC-7] -->stack DC-6/7	--	--	10.35	14.27	--	24.8*
Disa 1: Pouring and Cooling (EU-323) [in-line filters D-333] --> stack D-333A	263**	0.44	3.50	7.75	0.88	
Disa 1 Casting Cooling (EU-325), Shot Blast (EU-411), Grinding (EU-413), & Disa 2 Shot Blast (EU-431) [baghouse DC-8]	--	--	1.83	1.30	--	--

	Table 4: Potential to Emit (ton/yr)					
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC**
Disa 2 Sand Muller (EU-331) & Shakeout (EU-334) [baghouse DC-11]	--	--	5.29	3.10	--	24.8*
Disa 2 Pouring and Cooling (EU-333) [in-line filters D-333] --> stack D-333B	263***	0.44	4.06	7.75	0.88	
Disa 2 Casting Cooling (EU-335) & Grinding (EU-433) [baghouse DC-12]	--	--	3.68	2.61	--	--
Magnesium Treatment (EU-119) [baghouse DC-10]	--	--	0.56	0.32	--	0.25
Core Machines (EU-213, EU-231a & b)	--	--	--	--	--	5.1
Core Sand Storage Silo (EU-201)	--	--	0.003	0.012	--	--
Disa Sand Silo and Bond Storage Silo (EU-202)	--	--	0.181	0.79	--	--
Disa New Sand Day Bin	--	--	0.181	0.79	--	--
Disa 1 Pouring and Cooling (EU-323), Shakeout (EU-324), & Casting Cooling (EU-325), Disa 2 Pouring and Cooling (EU-333), Shakeout (EU-334), & Casting Cooling (EU-335)	See above	See above	See above	See above	See above	See above
Total for Modification	533.73	10.08	37.51	58.50	0.94	<40
Significant Level	100	40	25	15	40	40

* VOC emissions from the Disa 1 Pouring and Cooling Process (EU-323) and the Disa 1 Shakeout (EU-324) are limited to 24.8 tons/yr to render 326 IAC 8-1-6 not applicable. Also, VOC emissions from the Disa 2 Pouring and Cooling Process (EU-333) and the Disa 2 Shakeout (EU-334) are limited to 24.8 tons/yr to render 326 IAC 8-1-6 not applicable. However, VOC emissions from the Disa 1 Pouring and Cooling Process (EU-323), the Disa 1 Shakeout (EU-324), the Disa 2 Pouring and Cooling Process (EU-333) and the Disa 2 Shakeout (EU-334) combined are limited to 33.6 tons/yr to render 326 IAC 2-2 (PSD) not applicable for VOC emissions since total VOC emissions from this modification are limited to less than 40 tons per year.

** CO emissions represent emissions from the Disa 1 Pouring and Cooling Process (EU-323), Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325) combined.

*** CO emissions represent emissions from the Disa 2 Pouring and Cooling Process (EU-333), Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335) combined.

This modification does not result in any change in the potential to emit before controls of any of the emission units listed above. Pursuant to Part 70 Permit T 049-5999-00002, issued on December 22, 2006, Rochester Metal Products Corp. was required to submit a PSD application pursuant to conditions D.2.1 and D.2.2 for all of the emission units in the Disa 1 and Disa 2 processes, including the melt operations, for CO and PM/PM_{10} emissions. Therefore, these units are included in the table above. Limited emissions are based on PSD BACT limits where applicable.

See the State Rule Applicability Determination section of this TSD for the limits pursuant to 326 IAC 2-2-3 (PSD BACT).

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this proposed modification.

The requirements of 40 CFR Part 60, Subpart UUU, Standards of Performance for Calciners and Dryers in Mineral Industries, do not apply to the sand handling and reclamation activities at Rochester Metal Products because they are not thermal reclamation operations.

(b) There are no new National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit for this proposed modification.

The following requirements of 40 CFR Part 63, Subpart EEEEE, National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries, apply to the preheaters, metal melt furnaces, and pouring and cooling processes, identified as EU-118, EU-114, EU-115, EU-131, EU-132, EU-133, EU-313, EU-323 and EU-333:

(a) 40 CFR 63.7680
(b) 40 CFR 63.7681
(c) 40 CFR 63.7682(a-c)
(d) 40 CFR 63.7683(a-c) and (f)
(e) 40 CFR 63.7690(a)(1)(i-ii), (a)(5)(i-ii), and (a)(7)
(f) 40 CFR 63.7700(a), (b), and (e)
(g) 40 CFR 63.7710(a), (b)(1), (b)(3), (b)(4-6)
(h) 40 CFR 63.7720
(i) 40 CFR 63.7730(a) and (b)
(j) 40 CFR 63.7731
(k) 40 CFR 63.7732(a), (b)(1-2), (b)(4-6), (c)(1-2), (c)(4-6), (d), (h), and (i)
(l) 40 CFR 63.7734(a)(1), (a)(5), and (a)(7)
(m) 40 CFR 63.7735(a) and (d)
(n) 40 CFR 63.7736(c) and (d)
(o) 40 CFR 63.7740(b) and (c)
(p) 40 CFR 63.7741(b) and (f)
(q) 40 CFR 63.7742
(r) 40 CFR 63.7743(a)(1), (a)(5), (a)(7), (a)(12) and (c)
(s) 40 CFR 63.7744(a) and (c)
(t) 40 CFR 63.7745
(u) 40 CFR 63.7746
(v) 40 CFR 63.7747
(w) 40 CFR 63.7750(a), (b), (d), and (e)
(x) 40 CFR 63.7751
(y) 40 CFR 63.7752
(z) 40 CFR 63.7753
(aa) 40 CFR 63.7760
(bb) 40 CFR 63.7761
(cc) 40 CFR 63.7765
(dd) Table 1 to Subpart EEEEE of Part 63

(c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each of the emission units involved in this modification:

Table 5: Compliance Assurance Monitoring (CAM) Analysis

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
NG preheaters (No. 1 & No. 2) charge handling system (EU-118) – PM_{10}	Baghouse DC-9	Y	<100	<100	100	N	N
EIFs 4 & 5 (EU-114 & EU-115) – PM_{10}	Baghouse DC-9	Y	<100	<100	100	N	N
EIFs (EU-131, EU-132 & EU-133) – PM_{10}	Baghouse DC-13	Y	<100	<100	100	N	N
Disa 1/Disa 2 sand systems (EU-321) – PM_{10}	Baghouse DC-6	Y	**>100**	<100	100	**Y**	N
Disa 1 Casting Cooling (EU-325) – PM_{10}	Baghouse DC-6	Y	<100	<100	100	N	N
Disa 1 Shakeout (EU-324) – PM_{10}	Baghouse DC-7	Y	<100	<100	100	N	N
Disa 1 Pouring & Cooling (EU-323) – PM_{10}	In-line filters	Y	<100	<100	100	N	N
Disa 1 Shot Blast (EU-411) – PM_{10}	Baghouse DC-8	Y	<100	<100	100	N	N
Disa 1 Grinding (EU-413) – PM_{10}	Baghouse DC-8	Y	<100	<100	100	N	N
Disa 2 Shot Blast (EU-431) – PM_{10}	Baghouse DC-8	Y	<100	<100	100	N	N
Disa 2 Sand Muller (EU-331) –PM_{10}	Baghouse DC-11	Y	**>100**	<100	100	**Y**	N
Disa 2 Shakeout (EU-334) – PM_{10}	Baghouse DC-11	Y	<100	<100	100	N	N
Disa 2 Pouring & Cooling (EU-333) - PM_{10}	In-line filters	Y	<100	<100	100	N	N

Table 5: Compliance Assurance Monitoring (CAM) Analysis

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Disa 2 Casting Cooling (EU-335) - PM_{10}	Baghouse DC-12	Y	<100	<100	100	N	N
Disa 2 Grinding (EU-433) - PM_{10}	Baghouse DC-12	Y	<100	<100	100	N	N
Magnesium Treatment (EU-119) - PM_{10}	Baghouse DC-10	Y	<100	<100	100	N	N
Core Sand Storage Silo (EU-201) - PM_{10}	Bin Vent filter	Y	<100	<100	100	N	N
Disa Sand Silo & Bond Storage Silo (EU-202) - PM_{10}	Bin Vent filters	Y	<100	<100	100	N	N
Disa New Sand Day Bin - PM_{10}	Bin Vent filter	Y	<100	<100	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the Disa 1/Disa 2 sand systems (EU-321), and the Disa 2 Sand Muller (EU-331) for PM and PM_{10} upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)
Pursuant to 326 IAC 2-2-3 (PSD BACT), the following limits shall apply:

EIF melting system
The following emission limits have been determined to satisfy the requirement for BACT for the EIF melting system:

(a) PM emissions from the baghouse DC-9 controlling emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.98 pound per hour.

(b) PM_{10} emissions from the baghouse DC-9 controlling emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 1.0 pound per hour.

(c) A baghouse (DC-9) shall be in operation and control PM and PM_{10} emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115) at all times these units are in operation.

Since the EIFs are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR 63, Subpart EEEEE, the EIFs would also be subject to a PM limit of 0.005 gr/dscf under that rule. Therefore, compliance with the BACT limit for PM listed above will ensure compliance with the PM limit pursuant to the NESHAP, 40 CFR 63, Subpart EEEEE.

Disa 1 and Disa 2 Pouring and Cooling

The following emission limits have been determined to satisfy the requirement for BACT for the Disa 1 Pouring and Cooling process and the Disa 2 Pouring and Cooling process:

(a) PM emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 0.005 gr/dscf of exhaust air and 0.8 pound per hour.

(b) PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 2.5 pound per hour.

(c) PM emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 0.005 gr/dscf of exhaust air and 0.93 pound per hour.

(d) PM_{10} emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 2.5 pound per hour.

(e) The in-line filters (D-333) shall be in operation and control PM and PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) and the Disa 2 Pouring and Cooling process (EU-333) at all times that these facilities are in operation.

Disa 1/Disa 2 sand systems, Disa 1 casting shakeout, Disa 1 casting cooling, Disa 2 Sand Muller, Disa 2 shakeout system, Disa 1 / Disa 2 Casting Cooling, Disa 1 / Disa 2 Shot Blast, and Disa 1 / Disa 2 Grinding

The following emission limits have been determined to satisfy the requirement for BACT for the Disa 1 / Disa 2 sand systems (EU-321), the Disa 1 shakeout process (EU-324), the Disa 2 Sand Muller (EU-331), the Disa 2 shakeout system (EU-334), the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), the Disa 1 Grinding (EU-413), the Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433):

(a) Total PM emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 0.003 gr/dscf of exhaust air and 2.36 pounds per hour.

(b) Total PM_{10} emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 4.6 pound per hour.

(c) The baghouse DC-6 shall be in operation and control PM and PM_{10} emissions from the Disa 1/Disa 2 sand systems (EU-321) and the Disa 1 Casting Cooling (EU-325) at all times these units are in operation.

(d) The baghouse DC-7 shall be in operation and control PM and PM_{10} emissions from the Disa 1 Shakeout (EU-324) at all times this unit is in operation.

(e) PM emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.003 gr/dscf of exhaust air and 0.42 pound per hour.

(f) PM_{10} emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.42 pound per hour.

(g) The baghouse DC-8 shall be in operation and control PM and PM_{10} emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413) at all times these units are in operation.

(h) PM emissions from the baghouse DC-11, exhausting through stack DC-11 and controlling emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334), shall not exceed 0.003 gr/dscf of exhaust air and 1.21 pounds per hour.

(i) PM_{10} emissions from the baghouse DC-11, exhausting through stack DC-11 and controlling emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334), shall not exceed 1.0 pounds per hour.

(j) The baghouse DC-11 shall be in operation and control PM and PM_{10} emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334) at all times these units are in operation.

(k) PM emissions from the baghouse DC-12, exhausting internally and controlling emissions from Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433), shall not exceed 0.003 gr/dscf of exhaust air and 0.84 pound per hour.

(l) PM_{10} emissions from the baghouse DC-12, exhausting internally and controlling emissions from Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433), shall not exceed 0.84 pound per hour.

(n) The baghouse DC-12 shall be in operation and control PM and PM_{10} emissions from the Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433) at all times these units are in operation.

Disa magnesium treatment system

The following emission limits have been determined to satisfy the requirement for BACT for the Disa magnesium treatment system (EU-119):

(a) PM emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.003 gr/dscf of exhaust air and 0.13 pound per hour.

(b) PM_{10} emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.13 pound per hour.

(c) A baghouse (DC-10) shall be in operation and control PM and PM_{10} emissions from the Disa magnesium treatment system (EU-119) at all times this unit is in operation.

Disa core sand, sand, and bond storage silos and Disa New Sand Day Bin

The following emission limits have been determined to satisfy the requirement for BACT for the Disa core sand storage silo (EU-201), Disa sand storage silo and Disa bond storage silo (EU-202), and Disa New Sand Day Bin:

(a) PM emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.003 gr/dscf of exhaust air and 0.001 pound per hour.

(b) PM_{10} emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.001 pound per hour.

(c) The bin vent filters shall be in operation and control PM and PM_{10} emissions from the core sand storage (EU-201) at all times this unit is in operation.

(d) PM emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(e) PM_{10} emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.04 pound per hour.

(f) PM emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(g) PM_{10} emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.04 pound per hour.

CO BACT for Disa 1 / Disa 2 Pouring and Cooling, Disa 1 / Disa 2 Casting Shakeout, Disa 1 / Disa 2 Casting Cooling

The following emission limits have been determined to satisfy the requirement for BACT for the Disa 1 Pouring and Cooling Process (EU-323), the Disa 1 Casting Shakeout Process (EU-324), the Disa 1 Casting Cooling Process (EU-325), the Disa 2 Pouring and Cooling Process (EU-333), the Disa 2 Shakeout System (EU-334), and the Disa 2 Casting Cooling Process (EU-335):

(a) Total CO emissions from the Disa 1 Pouring and Cooling process (EU-323), the Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325) combined shall not exceed 6.0 pounds per ton of metal throughput.

(b) Total CO emissions from the Disa 2 Pouring and Cooling process (EU-333), the Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335) combined shall not exceed 6.0 pounds per ton of metal throughput.

Detailed BACT analyses for the emission units listed above are included in Appendix B of this TSD.

Hunter Casting Processes

The following limits shall apply pursuant to 326 IAC 2-2-4 as a result of the air dispersion modeling analysis performed:

(a) PM_{10} emissions from each of the baghouses DC-3 and DC-4 controlling emissions from the Hunter sand system (EU-311) shall not 1.0 pound per hour.

(b) PM_{10} emissions from each of the Stacks HP1, HP2, HP3 and HP4 associated with the Hunter pouring cooling process (EU-313) shall not 1.4 pound per hour.

(f) PM_{10} emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.7 pound per hour.

An air quality analysis and additional impact analysis is included in Appendix C of this document.

There are no other new state rules applicable as a result of this modification.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Compliance Determination Requirements
The Compliance Determination Requirements applicable to this modification are as follows:

Table 6: Summary of Testing Requirements

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
NG preheaters (No. 1 & No. 2), charge handling (EU-118), & EIFs 4 & 5 (EU-114 & EU-115)	Baghouse DC-9*	Prior to December 5, 2012	PM and PM_{10}	Once every 5 years	PM = 0.003 gr/dscf and 0.98 lb/hr, PM_{10} = 1.0 lb/hr
Disa magnesium treatment (EU-119)	Baghouse DC-10	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.003 gr/dscf and 0.13 lb/hr, PM_{10} = 0.13 lb/hr
Disa 1 Shakeout (EU-324), Disa 1/Disa 2 Sand System (EU-321), & Disa 1 Casting Cooling (EU-325)	Baghouses DC-6 and DC-7	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.003 gr/dscf and 2.36 lb/hr, PM_{10} = 4.6 lb/hr
Disa 1 Pouring & Cooling (EU-323)	In-line filters [stack 333A or 333C]	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.005 gr/dscf and 0.8 lb/hr, PM_{10} = 2.5 lb/hr
Disa 2 Pouring & Cooling (EU-333)	In-line filters [stack 333B or 333C]	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.005 gr/dscf and 0.93 lb/hr, PM_{10} = 2.5 lb/hr
Disa 2 Sand Muller (EU-331) & Shakeout (EU-334)	Baghouse DC-11	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.003 gr/dscf and 1.21 lbs/hr, PM_{10} = 1.0 lb/hr
Disa 2 Casting Cooling (EU-335) & Grinding (EU-433)	Baghouse DC-12	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.003 gr/dscf and 0.84 lbs/hr, PM_{10} = 0.84 lb/hr

Table 6: Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Limit or Requirement**
Disa 1 Casting Cooling (EU-325), Shot Blast (EU-411), Grinding (EU-413), & Disa 2 Shot Blast (EU-431)	Baghouse DC-8	Within 180 days of permit issuance	PM and PM_{10}	Once every 5 years	PM = 0.003 gr/dscf and 0.42 lbs/hr, PM_{10} = 0.42 lb/hr
Hunter Sand System (EU-311)	Baghouses DC-3 and DC-4	Within 180 days of permit issuance	PM_{10}	Once every 5 years	PM_{10} = 1.0 lb/hr
Hunter Pouring and Cooling (EU-313)	none	Within 180 days of permit issuance	PM_{10}	Once every 5 years	PM_{10} = 1.4 lb/hr
Hunter magnesium treatment (EU-120)	Baghouse DC-10	Within 180 days of permit issuance	PM_{10}	Once every 5 years	PM_{10} = 0.13 lb/hr

* A stack test for PM, PM_{10} and condensable particulate matter was last performed on baghouse DC-9 on December 5, 2007. Another test was performed on this baghouse on October 9, 2007 for PM and HAP emissions.

Compliance Monitoring Requirements
The compliance monitoring requirements applicable to this modification are as follows:

Table 7: Summary of Compliance Monitoring Requirements				
Control Device	**Parameter**	**Frequency**	**Range**	**Excursions and Exceedances**
In-line filters [stack 333A] [stack 333B] [stack 333C]	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Inspections to verify the placement, integrity and particulate loading of the in-line filters	Daily	Normal-Abnormal	
Baghouses DC-3 & DC-4	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	2” – 8” of water	
Baghouses DC-6 & DC-7	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	2” – 8” of water	
Baghouse DC-8	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	0.5” – 8” of water	
Baghouse DC-9	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	2” – 8” of water	
Baghouse DC-10	Pressure Drop	Daily	0.5” – 8” of water	Response steps

Table 7: Summary of Compliance Monitoring Requirements				
Control Device	**Parameter**	**Frequency**	**Range**	**Excursions and Exceedances**
Baghouse DC-11	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	2” – 8” of water	
Baghouse DC-12	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	0.5” – 8” of water	Response steps
Baghouse DC-13	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Pressure Drop	Daily	0.5” – 8” of water	

These monitoring conditions are necessary because the above listed control devices must operate properly to ensure compliance with the PSD BACT PM and PM_{10} limits pursuant to 326 IAC 2-2-3 (PSD BACT) and 326 IAC 2-7 (Part 70).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T 049-5999-00002, issued on December 22, 2006. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No. 1 The following change was made to the emission unit descriptions:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

Melt Operations, consisting of the following:

(a) Two (2) natural gas-fired preheaters (No. 1 and No. 2) and a charge handling system, identified as EU-118, modified in 1996, No. 2 preheater approved for construction in 2007, controlled by baghouse DC-9, rated at 7~~.0~~ and 14~~.0~~ million British thermal units per hour for No. 1 and No. 2 preheaters, respectively, exhausted to Stack DC-9, preheater capacities: 13~~.0~~ and 21~~.0~~ tons of metal, respectively, charge system capacity: 34~~.0~~ tons of metal per hour total.

(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.

(c) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3~~.0~~, 3~~.0~~, and 7~~.0~~ tons of metal per hour, respectively, 13 tons of metal per hour total.

Hunter Casting Processes, consisting of the following:

(d) One (1) Hunter sand system, identified as EU-311, commenced construction in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(e) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979 and modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(f) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

(g) One (1) Hunter casting cooling process, identified as EU-315, commenced construction in 1979, controlled by baghouse DC-2, exhausted internally, nominal capacity: 8.34 tons of metal per hour.

(h) One (1) Hunter face sand muller, identified as EU-316, constructed in 1983, emissions uncontrolled and unvented, capacity: 1~~.0~~ ton of sand per hour.

(i) One (1) Hunter shotblast process, identified as EU-410, consisting of two (2) shotblast units, constructed in 1979 and **modified in** 1996, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(j) One (1) Hunter grinding process, identified as EU-412, consisting of various stationary and hand-held grinding units, constructed in 1979~~,~~ **and** modified in 1995, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

Hunter Storage Silos

~~(x)~~ **(k)** One (1) **Hunter** core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54~~.0~~ tons of core sand.

~~(dd)~~ **(l)** One (1) Hunter sand storage silo, identified as EU-203, **constructed in 1980,** controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

~~(ee)~~ **(m)** One (1) Hunter bond storage silo, identified as EU-204, **constructed in 1980,** controlled by a bin vent filter, capacity: 10 tons of bond per hour

Disa 1 Processes, consisting of the following:

~~(l)~~ **(n)** One (1) Disa 1**/Disa 2** sand system, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 60~~.0~~ tons of sand per hour.

~~(m)~~ **(o)(1) Prior to construction of Stack D-333C:**
One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10~~.0~~ tons of metal per hour and 60~~.0~~ tons of sand per hour.

(o)(2) After construction of Stack D-333C:
One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

~~(n)~~ **(p)** One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled by baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10~~.0~~ tons of metal per hour and 60~~.0~~ tons of sand per hour.

~~(o)~~ **(q)** One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6~~ and DC-8~~, exhausted to Stack DC-6/7**, and DC-8,** exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(p)~~ **(r)** One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(q)~~ **(s)** One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour total, maximum capacity: 10~~.0~~ tons of metal per hour total.

Disa 2 Processes, consisting of the following:

~~(r)~~ **(t)** One (1) Disa 2 sand ~~system~~ **muller**, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 60~~.0~~ tons of sand per hour.

~~(s)~~ **(u)(1) Prior to construction of Stack D-333C:**
One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10~~.0~~ tons of metal per hour and 60~~.0~~ tons of sand per hour.

(u)(2) After construction of Stack D-333C:
One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

~~(t)~~ **(v)** One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10~~.0~~ tons of metal per hour and 60~~.0~~ tons of sand per hour.

~~(u)~~ **(w)** One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(v)~~ **(x)** One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(w)~~ **(y)** One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour total, maximum capacity: 10~~.0~~ tons of metal per hour total.

Disa Storage Silos

~~(y)~~ **(z)** One (1) **Disa** core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30~~.0~~ tons of core sand and 0.85 tons of core sand per hour.

~~(cc)~~ **(aa)** One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, **constructed in 1996,** controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.

~~(ff)~~ **(bb)** One (1) Disa New Sand Day Bin, **identified as EU-DNS, constructed in 1996,** controlled by a bin vent, internally vented, ~~constructed in 1996,~~ capacity: 10 tons of sand and 66 tons of sand per hour.

Magnesium Treatment System

~~(k)~~ **(cc)** One (1) Hunter magnesium treatment system, identified as EU-120, permitted in 2009, controlled by baghouse DC-10, exhausted internally, nominal capacity: 10.3 tons of metal per hour.

~~(bb)~~ **(dd)** One (1) **Disa** magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.

Phenolic Urethane Cold Box Core Production System, consisting of the following:

~~(z)~~ **(ee)** Six (6) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2~~.0~~ pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:

(1) EU-212a, constructed in 1989, served by mixer A, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(2) EU-212b, constructed in 1991, served by mixer B, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(3) EU-212c, constructed in 1993, served by mixer C, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(4) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(5) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(6) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.

~~(aa)~~ **(ff)** One (1) core wash operation (dip tank), identified as EU-503, constructed in 1972, emissions uncontrolled, nominal capacity: 2.8 tons of core per hour and 5.7~~0~~ pounds of core wash per hour.

~~**Storage Silos**~~

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour rated at a total of 32.13 million British thermal units per hour consisting of: [326 IAC 2-2]

(1) One (1) Hunter finishing make-up air unit, ~~installed~~ **constructed** in 1982, rated at 4.85 million British thermal units per hour.

(2) One (1) Hunter molding make-up air unit, ~~installed~~ **constructed** in 1989, rated at 5.41 million British thermal units per hour.

(3) Three (3) Disa make-up air units #1, #2 and #3, all ~~installed~~ **constructed** in 1996, rated at 4.0~~0~~ million British thermal units per hour each.

(4) One (1) Disa make-up air unit #4, ~~installed~~ **constructed** in 1999, rated at 6.0~~0~~ million British thermal units per hour.

(5) Six (6) shell core machines, identified as HS-16-RA, ~~installed~~ **constructed** in 1988, rated at 1.18 million British thermal units per hour total.

(6) Two (2) shell core machines, identified as HS-CB-22-RA, ~~installed~~ **constructed** in 1988, rated at 0.74 million British thermal units per hour total.

(7) Three (3) shell core machines, identified as HP-43-A, ~~installed~~ **constructed** in 1988, rated at 0.45 million British thermal units per hour total.

(8) HVAC units, consisting of five (2) units in the pattern shop, main office (2) locker room and Disa lab, ~~installed~~ **constructed** in 1992, 1995 (2), 1996 and 2000, rated at 0.20, 0.10, 0.06, 0.75 and 0.09 million British thermal units per hour, respectively.

(9) Eight (8) melt area ladle repair torches, rated at 0.30 million British thermal units per hour total**, constructed in 1996**.

(b) One (1) electric induction holding furnace, identified as EU-113**, constructed in 1996** [326 IAC 6-3-2].

(c) One (1) pattern shop operation, equipped with a baghouse at 2,000 cubic feet per minute and 0.03 grains per dry standard cubic feet, ~~installed~~ **constructed** in 1997 [326 IAC 6-3-2].

(d) One (1) **Hunter** sample shotblast operation, equipped with a baghouse at 1,500 cubic feet per minute and 0.03 grains per dry standard cubic feet ~~installed~~ **constructed** in 2001 [326 IAC 6-3-2].

(e) One (1) dry ice blast operation, equipped with a 2,000 cubic feet per minute blower attached to a filter, exhausted internally, ~~installed~~ **constructed** in 2003 [326 IAC 6-3-2].

(f) One (1) **Disa** sample shotblast **operation**~~ in the Disa plant~~, equipped with a 1,000 cubic feet per minute ~~dust collector~~ **baghouse**, deemed an insignificant activity**, constructed in 1996** [326 IAC 6-3-2].

Change No. 2 Section D.1 has been revised as follows:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Facilities Constructed Prior to 1996

(d) One (1) Hunter sand system, identified as EU-311, commenced construction in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(e) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979 and modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(f) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

(g) One (1) Hunter casting cooling process, identified as EU-315, commenced construction in 1979, controlled by baghouse DC-2, exhausted internally, nominal capacity: 8.34 tons of metal per hour.

(h) One (1) Hunter face sand muller, identified as EU-316, constructed in 1983, emissions uncontrolled and unvented, capacity: 1~~.0~~ ton of sand per hour.

(i) One (1) Hunter shotblast process, identified as EU-410, consisting of two (2) shotblast units, constructed in 1979 and **modified in** 1996, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(j) One (1) Hunter grinding process, identified as EU-412, consisting of various stationary and hand-held grinding units, constructed in 1979~~,~~ **and** modified in 1995, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

~~(x)~~ **(k)** One (1) **Hunter** core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54~~.0~~ tons of core sand.

~~(bb)~~ **(l)** One (1) Hunter sand storage silo, identified as EU-203, **constructed in 1980,** controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

~~(ee)~~ **(m)** One (1) Hunter bond storage silo, identified as EU-204, **constructed in 1980,** controlled by a bin vent filter, capacity: 10 tons of bond per hour

~~(z)~~ **(ee)** Six (6) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2~~.0~~ pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:

(1) EU-212a, constructed in 1989, served by mixer A, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(2) EU-212b, constructed in 1991, served by mixer B, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(3) EU-212c, constructed in 1993, served by mixer C, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(4) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(5) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(6) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.

~~(aa)~~ **(ff)** One (1) core wash operation (dip tank), identified as EU-503, constructed in 1972, emissions uncontrolled, nominal capacity: 2.8 tons of core per hour and 5.7~~0~~ pounds of core wash per hour.

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour rated at a total of 32.13 million British thermal units per hour consisting of: [326 IAC 2-2]

(1) One (1) Hunter finishing make-up air unit, constructed in 1982, rated at 4.85 million British thermal units per hour.

(2) One (1) Hunter molding make-up air unit, constructed in 1989, rated at 5.41 million British thermal units per hour.

(3) Six (6) shell core machines, identified as HS-16-RA, constructed in 1988, rated at 1.18 million British thermal units per hour total.

(4) Two (2) shell core machines, identified as HS-CB-22-RA, constructed in 1988, rated at 0.74 million British thermal units per hour total.

(5) Three (3) shell core machines, identified as HP-43-A, constructed in 1988, rated at 0.45 million British thermal units per hour total.

(6) HVAC units, constructed in 1992, and 1995 (2), rated at 0.20, 0.10, and 0.06, million British thermal units per hour, respectively.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Emission Limitations for Construction Completed Prior to 1996 [326 IAC 2-2]

The total PM, $PM_{10,}$ VOC and CO emissions from the facilities listed in this section, all constructed prior to 1996, shall each be limited to less than one hundred (100) tons per year. Compliance with these emission limits shall be demonstrated by complying with the throughput and emission limits specified in Sections ~~D.4~~ **D.2, D.3**, D.7 and D.9. Compliance makes the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities listed in this section.

Change No. 3 Since the source has now complied with the requirements of conditions D.2.1 and D.2.2, section D.2 has been deleted from the Part 70 permit. Sections D.3 and D.4 have been renumbered as D.2 and D.3.

~~**SECTION D.2 FACILITY OPERATION CONDITIONS**~~

~~**Facility Description [326 IAC 2-7-5(15)]: Facilities Constructed 1996 and Beyond**~~

~~**Melt Operations, consisting of the following:**~~

~~(a) Two (2) natural-gas fired preheaters and a charge handling system, identified as EU-118, modified in 1996, controlled by baghouse DC-9, rated at 7.0 and 14.5 million British thermal units per hour for preheaters 1 and 2, respectively, exhausted to Stack DC-9, preheater capacities: 13.0 and 21.0 tons of metal, respectively, charge system capacity: 34.0 tons of metal per hour total.~~

~~(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.~~

~~(c) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3.0, 3.0, and 7.0 tons of metal per hour, respectively, 13 tons of metal per hour total.~~

~~**Disa 1 Processes, consisting of the following:**~~

~~(k) One (1) Disa 1 sand system, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 60.0 tons of sand per hour.~~

~~(l) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10.0 tons of metal per hour and 60.0 tons of sand per hour.~~

~~(m) One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10.0 tons of metal per hour and 60.0 tons of sand per hour.~~

~~(n) One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6 and DC-8, exhausted to Stack DC-6/7 and exhausted internally, nominal capacity: 6.0 tons of metal per hour, maximum capacity: 10.0 tons of metal per hour.~~

~~(o) One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6.0 tons of metal per hour, maximum capacity: 10.0 tons of metal per hour.~~

~~(p) One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6.0 tons of metal per hour total, maximum capacity: 10.0 tons of metal per hour total.~~

~~Disa 2 Processes, consisting of the following:~~

~~(q) One (1) Disa 2 sand system, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 60.0 tons of sand per hour.~~

~~(r) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10.0 tons of metal per hour and 60.0 tons of sand per hour.~~

~~(s) One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10.0 tons of metal per hour and 60.0 tons of sand per hour.~~

~~(t) One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6.0 tons of metal per hour, maximum capacity: 10.0 tons of metal per hour.~~

~~Facility Description [326 IAC 2-7-5(15)]: Facilities Constructed 1996 and Beyond (continued)~~

~~(u) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6.0 tons of metal per hour, maximum capacity: 10.0 tons of metal per hour.~~

~~(v) One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6.0 tons of metal per hour total, maximum capacity: 10.0 tons of metal per hour total.~~

~~Phenolic Urethane Cold Box Core Production System, consisting of the following:~~

~~(x) One (1) core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30.0 tons of core sand and 0.85 tons of core sand per hour.~~

~~(y) Three (3) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2.0 pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:~~

~~(1) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.~~

~~(2) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.~~

~~(3) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.~~

~~Magnesium Treatment System~~

~~(aa) One (1) magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.~~

~~Storage Silos~~

~~(bb) One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.~~

~~(ee) One (1) Disa New Sand Day Bin, controlled by a bin vent, internally vented, constructed in 1996, capacity: 10 tons of sand and 66 tons of sand per hour.~~

~~(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)~~

~~**Emission Limitations and Standards [326 IAC 2-7-5(1)]**~~

~~D.2.1 PSD Application [326 IAC 2-2]~~

~~Rochester Metal Products Corp. shall submit a PSD application by March 1, 2007 for all of the emission units in the Disa 1 and Disa 2 processes, including the melt operations to:~~

~~Indiana Department of Environmental Management~~
~~Permits Branch, Office of Air Quality~~
~~100 North Senate Avenue~~
~~Indianapolis, Indiana 46204-2251~~

~~D.2.2 PSD Applicability [326 IAC 2-2]~~

~~The IDEM, OAQ has information that indicates that all of the emission units in this section are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-2. The Permittee shall submit a complete PSD application by March 1, 2007 for all of the emission units in the Disa 1 and Disa 2 processes, including the melt operations, for CO and PM/PM_{10} emissions.~~

~~The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-2 and a schedule for achieving compliance with such requirements.~~

Change No. 4 Section D.3, now re-numbered as D.2, is revised to include PM and PM_{10} emission limits pursuant to 326 IAC 2-2-3 (PSD BACT). Also, additional PM_{10} limits have been added pursuant to 326 IAC 2-2-4 for the Hunter Induction Furnaces included in air dispersion modeling analysis for the Disa 1 and Disa 2 processes. There are no compliance monitoring provisions included for these units because the NESHAP provisions contained in Section E of the permit are more stringent. Section D.3, now re-numbered as D.2, is revised as follows:

SECTION ~~D.3~~D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Melt Operations & Natural Gas Combustion

Melt Operations

(a) Two (2) natural gas-fired preheaters (No. 1 and No. 2) and a charge handling system, identified as EU-118, modified in 1996, No. 2 preheater approved for construction in 2007, controlled by baghouse DC-9, rated at 7~~.0~~ and 14~~.0~~ million British thermal units per hour for No. 1 and No. 2 preheaters, respectively, exhausted to Stack DC-9, preheater capacities: 13~~.0~~ and 21~~.0~~ tons of metal, respectively, charge system capacity: 34~~.0~~ tons of metal per hour total.

(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.

(c) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled

by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3~~.0~~, 3~~.0~~, and 7~~.0~~ tons of metal per hour, respectively, 13 tons of metal per hour total.

Insignificant Activities: Natural Gas Combustion

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour rated at a total of 32.13 million British thermal units per hour consisting of: [326 IAC 2-2]

(1) One (1) Hunter finishing make-up air unit, ~~installed~~ **constructed** in 1982, rated at 4.85 million British thermal units per hour.

(2) One (1) Hunter molding make-up air unit, ~~installed~~ **constructed** in 1989, rated at 5.41 million British thermal units per hour.

(3) Three (3) Disa make-up air units #1, #2 and #3, all ~~installed~~ **constructed** in 1996, rated at 4.0~~0~~ million British thermal units per hour each.

(4) One (1) Disa make-up air unit #4, ~~installed~~ **constructed** in 1999, rated at 6.0~~0~~ million British thermal units per hour.

(5) Six (6) shell core machines, identified as HS-16-RA, ~~installed~~ **constructed** in 1988, rated at 1.18 million British thermal units per hour total.

(6) Two (2) shell core machines, identified as HS-CB-22-RA, ~~installed~~ **constructed** in 1988, rated at 0.74 million British thermal units per hour total.

(7) Three (3) shell core machines, identified as HP-43-A, ~~installed~~ **constructed** in 1988, rated at 0.45 million British thermal units per hour total.

(8) HVAC units, consisting of five (2) units in the pattern shop, main office (2) locker room and Disa lab, ~~installed~~ **constructed** in 1992, 1995 (2), 1996 and 2000, rated at 0.20, 0.10, 0.06, 0.75 and 0.09 million British thermal units per hour, respectively.

(9) Eight (8) melt area ladle repair torches, rated at 0.30 million British thermal units per hour total**, constructed in 1996**.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

~~D.3~~**D.2**.1 ~~Source-Wide Natural Gas Usage Limits~~ **CO and VOC PSD Minor Limits** [326 IAC 2-2]

(a) The total natural gas usage for the entire source shall not exceed 150~~.0~~ million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

~~(a)~~ **(b)** CO emissions shall not exceed 84 pounds per million cubic feet of natural gas.

~~(b)~~ **(c)** VOC emissions shall not exceed 5.5 pounds per million cubic feet of natural gas.

(d) Compliance with the **limits in (a) and (b) above will limit the CO emissions from all facilities constructed prior to 1996 to less that one hundred (100) tons per year and shall render** ~~natural gas usage and CO emission limit renders~~ the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities ~~listed in Section D.1~~ **constructed prior to 1996**.

(e) Compliance with the **limits in (a) and (b) above combined with the limits in Condition D.7.1 will limit the VOC emissions from Disa 1 and Disa 2 to less that forty (40) tons per year and shall render** ~~natural gas usage and VOC emission limit renders~~ the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

~~D.3.2 PM and PM_{10} Minor PSD Limitations [326 IAC 2-2]~~

~~(a) The PM emission rate from the baghouse DC-9, controlling No. 1 and No. 2 preheaters and charge handling system, identified as EU-118, and the two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, shall be less than 5.70 pounds per hour.~~

~~(b) The PM_{10} emission rate from the baghouse DC-9, controlling No. 1 and No. 2 preheaters and charge handling system, identified as EU-118, and the two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, shall be less than 3.42 pounds per hour.~~

~~Compliance with these limits which includes the potential to emit of the natural gas combustion from the No. 2 preheater shall ensure that the potential to emit from the No. 2 preheater permitted under Minor Source Modification 049-23878-00002 is less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM_{10} per year and therefore will render the requirements of 326 IAC 2-2 not applicable .~~

D.2.2 PM and PM_{10} PSD BACT Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the baghouse DC-9 controlling emissions from the natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.98 pound per hour.

(b) PM_{10} emissions from the baghouse DC-9 controlling emissions from the natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 1.0 pound per hour.

(c) PM emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.7 pound per hour.

(d) PM_{10} emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.7 pound per hour.

~~D.3.3~~ **D.2.3** Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pounds per hour limitation calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\cancel{.0}\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Device - Stack # Emission Units	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
Baghouse DC-9 - DC-9		
EU-114	10.5	19.8
EU-115	10.5	19.8
EU-118 ~~(2 Preheaters)~~		
Preheater No. 1	13~~.0~~	22.9
Preheater No. 2	21~~.0~~	31.5
		Total 94.0
Baghouse DC-13 - DC-13		
EU-131	3~~.0~~	8.56
EU-132	3~~.0~~	8.56
EU-133	7~~.0~~	15.1
		Total 32.2

~~D.3.4~~ **D.2.4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-9 and DC-13**, and the natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), the electric induction furnaces 4 and 5 (EU-114 and EU-115), the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133)**.

Compliance Determination Requirements

~~D.3.5~~ **D.2.5** Particulate Control [326 IAC 2-7-6(6)] **[326 IAC 2-2]**

~~Pursuant to CP-049-4112-00002, issued on July 3, 1995, and CP-049-8548-00002, issued on October 17, 1997, and in order to comply with Condition D.3.2 and D.3.3:~~

(a) Baghouse DC-9 for particulate control shall be in operation and control emissions from the ~~two (2)~~ natural-gas fired preheaters **(No. 1 and No. 2),** ~~and a~~ **the** charge handling system (EU-118)**,** and the ~~two (2)~~ electric induction furnaces (EU-114 and EU-115) at all times that these processes are in operation.

(b) Baghouse DC-13 for particulate control shall be in operation and control emissions from the ~~three (3)~~ Hunter electric induction furnaces (EU-131, EU-132 and EU-133) at all times that these processes are in operation.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

~~D.3.6~~ **D.2.6** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with ~~Condition D.3.2~~ **Conditions D.2.2 and D.2.3**, the Permittee shall perform PM and PM_{10} testing for **the natural-gas fired preheaters (No. 1 and No. 2),** the charge handling system (EU-118)**,** and the ~~two (2)~~ electric induction furnaces (EU-114 and EU-115), all controlled by baghouse DC-9.

(b) **In order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing for the Hunter electric induction furnaces (EU-131, EU-132 and EU-133) controlled by baghouse DC-13.**

(c) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

~~**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**~~

~~D.3.7 Visible Emissions Notations~~

~~(a) Visible emission notations of the charge handling system (EU-118) and the two (2) electric induction furnaces (EU-114 and 115) Stack exhaust DC-9 as well as the three (3) Hunter electric induction furnaces (EU-131, EU-132 and EU-133) Stack exhaust DC-13 shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) 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 visible emissions for that specific process.~~

~~(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.~~

~~D.3.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

~~(a) The Permittee shall record the pressure drop across baghouse DC-9 used in conjunction with the two (2) preheaters and a charge handling system (EU-118)~~**~~,~~** ~~and the two (2) electric induction furnaces (EU-114 and EU-115) at least once per day when charge handling and melting are in operation.~~

~~When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

~~(b) The Permittee shall record the pressure drop across baghouse DC-13 used in conjunction with the three (3) Hunter electric induction furnaces (EU-131, EU-132 and EU-133) Stack exhaust DC-13 at least once per day when these melting processes are in operation.~~

~~When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

~~(c) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

~~D.3.9 Broken or Failed Bag Detection~~

~~(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.3.10~~ **D.2.7** Record Keeping Requirements

(a) To document compliance with Condition ~~D.3~~ **D.2**.1**(a)**, the Permittee shall maintain records of the natural gas usage for the entire source on a monthly basis.

(b) ~~To document compliance with Condition D.3.7, the Permittee shall maintain records of visible emission notations of Stack exhausts DC-9 and DC-13 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).~~

~~(c) To document compliance with Condition D.3.8, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).~~

~~(d)~~ All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.3.11~~ **D.2.8** Reporting Requirements

A quarterly summary of the information to document compliance with Condition ~~D.3~~ **D.2**.1**(a)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 5 Section D.4, now re-numbered section D.3, of the Part 70 permit is revised to include PM_{10} emission limits pursuant to 326 IAC 2-2-4 for the units included in air dispersion modeling analysis for the Disa 1 and Disa 2 processes. The requirements for the Hunter magnesium treatment process have been removed from this section as they are now included in Section D.8. Section D.4, now re-numbered as D.3, is revised as follows:

SECTION ~~D.4~~ D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Hunter Casting Processes

(d) One (1) Hunter sand system, identified as EU-311, constructed in 1979 and modified in 1986, controlled by baghouses DC-3 and DC-4, exhausted to Stacks DC-3 and DC-4, nominal capacity: 100 tons of sand per hour.

(e) One (1) Hunter pouring cooling process, identified as EU-313, commenced construction in 1979, modified in 1986, and modified in 1999, emissions uncontrolled and exhausted to Stacks HP1, HP2, HP3 and HP4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Hunter Lines No. 1, 2 and 3 were constructed in 1980 and are exhausted to Stacks HP1, HP2 and HP3 uncontrolled. Hunter Line No. 4 was constructed in 1986 and is exhausted to Stack HP4.

(f) One (1) Hunter shakeout process, identified as EU-314, commenced construction in 1979, controlled by baghouse DC-4, exhausted to Stack DC-4, nominal capacity: 10.3 tons of metal per hour and 100 tons of sand per hour. Three (3) rotary shakeouts were installed with Hunter Lines No. 1, 2 and 3 in 1980 **and the rotary shakeout for Hunter Line 2 was replaced with a flatdeck shakeout in 1993**. Hunter line No. 4 was constructed in 1986 and combined with the shakeout for Hunter Line No. 3.

(g) One (1) Hunter casting cooling process, identified as EU-315, commenced construction in 1979, controlled by baghouse DC-2, exhausted internally, nominal capacity: 8.34 tons of metal per hour.

(h) One (1) Hunter face sand muller, identified as EU-316, constructed in 1983, emissions uncontrolled and unvented, capacity: 1~~.0~~ ton of sand per hour.

(i) One (1) Hunter shotblast process, identified as EU-410, consisting of two (2) shotblast units, constructed in 1979 and **modified in** 1996, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

(j) One (1) Hunter grinding process, identified as EU-412, consisting of various stationary and hand-held grinding units, constructed in 1979~~,~~ **and** modified in 1995, controlled by baghouse DC-5, exhausted internally, nominal capacity: 8.34 tons of metal per hour total.

~~(k) One (1) Hunter magnesium treatment system, identified as EU-120, permitted in 2009, controlled by baghouse DC-10, exhausted internally, nominal capacity: 10.3 tons of metal per hour.~~

(k) One (1) Hunter core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54 tons of core sand.

(l) One (1) Hunter sand storage silo, identified as EU-203, constructed in 1980, controlled by baghouse DC-3, capacity: 10 tons of sand per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

~~D.4~~ **D.3**.1 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter pouring cooling process (EU-313), **the** Hunter casting cooling process (EU-315)**, the** Hunter shotblast process (EU-410) and **the** Hunter grinding process (EU-412) shall each not exceed 45,000 tons each per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The amount of sand processed by the Hunter face sand muller (EU-316) shall not exceed 500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The Hunter sand system (EU-311), the Hunter shakeout process (EU-314)**, the core sand storage silo (EU-200),** and **the** Hunter sand storage silo (EU-203), shall each not exceed 6,500 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month.

~~(g)~~ **(d)** Stack DC-2 emissions from the Hunter casting cooling process (EU-315) shall not exceed:

(1) 0.3~~00~~ pounds of PM per ton of metal throughput, and

(2) 0.3~~00~~ pounds of PM_{10} per ton of metal throughput.

~~(d)~~ **(e)** Stack DC-3 emissions from the Hunter sand system (EU-311), the Hunter sand storage silo (EU-203) and the core sand storage silo (EU-200) ~~of Section D.7~~ shall not exceed:

(1) 3.0~~0~~ pounds of PM per hour, and

(2) 3.0~~0~~ pounds of PM_{10} per hour.

~~(e)~~ **(f)** Stack DC-4 emissions from the Hunter sand system (EU-311) and **the** Hunter shakeout process (EU-314) shall not exceed:

(1) 7.0~~0~~ pounds of PM per hour, and

(2) 8.0~~0~~ pounds of PM_{10} per hour.

~~(h)~~ **(g)** Stack DC-5 emissions from the Hunter shotblast process (EU-410) and **the** Hunter grinding process (EU-412) shall not exceed:

(1) 0.23~~33~~ pounds of PM per ton of metal throughput, and

(2) 0.23~~33~~ pounds of PM_{10} per ton of metal throughput.

~~(f)~~ **(h)** Stacks HP1 - HP4 emissions from the Hunter pouring cooling process (EU-313) shall not exceed:

(1) 0.7~~00~~ pounds of PM per ton of metal throughput, and

(2) 0.7~~00~~ pounds of PM_{10} per ton of metal throughput.

(i) Emissions from the Hunter face sand muller (EU-316) shall not exceed 3.6 pounds of PM per ton of sand and 0.54 pounds of PM_{10} per ton of sand.

Compliance with the limits in paragraphs (a) through (i) above combined with the limits in ~~Conditions D.7.1 and~~ **Condition** D.9.1 shall limit the potential to emit PM and PM_{10} from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of PM and PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.3.2 PM_{10} PSD Limitations [326 IAC 2-2-4]

The following limits shall apply pursuant to 326 IAC 2-2-4 as a result of the air dispersion modeling analysis performed for SSM 049-24381-00002:

(a) PM_{10} emissions from each of the baghouses DC-3 and DC-4 controlling emissions from the Hunter sand system (EU-311) shall not 1.0 pound per hour.

(b) PM_{10} emissions from each of the Stacks HP1, HP2, HP3 and HP4 associated with the Hunter pouring cooling process (EU-313) shall not 1.4 pound per hour.

~~D.4.2 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]~~

~~(a) The amount of metal processed by the Hunter magnesium treatment system (EU-120) shall not exceed 16,600 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(b) Stack DC-10 emissions from the Hunter magnesium treatment system (EU-120) shall not exceed:~~

~~(1) 3.0 pounds of PM per ton of metal throughput, and~~

~~(2) 1.8 pounds of PM_{10} per ton of metal throughput.~~

~~Compliance with these limits shall limit the potential to emit PM and PM_{10} from Stack DC-10 from the Hunter magnesium treatment system (EU-120), to less than twenty-five (25) tons per year of PM, and less than fifteen (15) tons per year of PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to add the Hunter magnesium treatment system (EU-120).~~

~~D.4.3~~ **D.3.3** CO PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter pouring cooling process (EU-313) and **the** Hunter shakeout process (EU-314) shall each not exceed 45,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total CO emissions from the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall not exceed 4.15 pounds of per ton of metal throughput.

Compliance with these limits shall limit the potential to emit CO from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of CO, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

~~D.4.4~~ **D.3.4** Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) The total throughput of metal to the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall ~~each~~ be less than 45,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The throughput of metal to Hunter Line No. 4 of the Hunter pouring cooling process (EU-313) shall be less than 36,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total VOC emissions from the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) shall not exceed 1.34 pounds per ton of metal.

Compliance with the limits in paragraphs (a) through (c) above combined with the limits in Condition ~~D.7.2~~ **D.7.1** shall limit the potential to emit VOC from the facilities constructed prior to 1996, to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

~~D.4.5~~ **D.3.5** Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pounds per hour limitation calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\cancel{.0}\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Devices - Stack # Emission Units	**Process Weight (tons per hour)**	**Particulate Emission Rate (pounds per hour)**
None - HP1, HP2, HP3 and HP4 EU-313	110.3	52.3
None - None EU-316	1~~.00~~	4.1~~0~~
Baghouse DC-2 - DC-2 EU-315	8.34	17~~.0~~
Baghouse DC-3 - DC-3 EU-200 EU-203 EU-311	10~~.0~~ 10~~.0~~ 100	19.2 19.2 51.3 Total 89.7

Control Devices - Stack # Emission Units	**Process Weight (tons per hour)**	**Particulate Emission Rate (pounds per hour)**
Baghouse DC-4 - DC-4 EU-311 EU-314	100 110.3	51.3 52.3 Total 103.6
Baghouse DC-5 - DC-5 EU-410 EU-412	8.34 8.34	17~~.0~~ 17~~.0~~ Total 34~~.0~~
~~Baghouse DC-10 - internal~~ ~~EU-120~~	~~10.3~~	~~19.56~~

~~D.4.6~~ **D.3.6** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-2, DC-3, DC-4, DC-5, ~~and DC-10,~~ and **the core sand silo (EU-200), the Hunter sand storage silo (EU-203),** the Hunter sand system (EU-311)**,** and **the** Hunter shakeout process (EU-314).

Compliance Determination Requirements

~~D.4.7~~ **D.3.7** Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions ~~D.4.1(a)~~ **D.3.1(d)** and ~~D.4~~ **D.3**.5, baghouse DC-2 for particulate control shall be in operation and control emissions from the Hunter casting cooling process (EU-315) at all times that this Hunter process is in operation.

(b) In order to comply with Conditions ~~D.4.1(d)~~ **D.3.1(e)** and ~~D.4~~ **D.3**.5, baghouse DC-3 for particulate control shall be in operation and control emissions from **the core sand storage silo (EU-200), the Hunter sand storage silo (EU-203), and** the Hunter sand system (EU-311) at all times that ~~this~~ **these** Hunter ~~process is~~ **processes are** in operation.

(c) In order to comply with Conditions ~~D.4.1(e)~~ **D.3.1(f)** and ~~D.4~~ **D.3**.5, baghouse DC-4 for particulate control shall be in operation and control emissions from the Hunter sand system (EU-311), and **the** Hunter shakeout process (EU-314) at all times that these Hunter processes are in operation.

(d) In order to comply with Conditions ~~D.4.1(h)~~ **D.3.1(g)** and ~~D.4~~ **D.3**.5, baghouse DC-5 for particulate control shall be in operation and control emissions from the Hunter shotblast process (EU-410) and **the** Hunter grinding process (EU-412) at all times that these Hunter processes are in operation.

(e) ~~In order to comply with Conditions D.4.1(j) and D.4.5, baghouse DC-10 for particulate control shall be in operation and control emissions from the Hunter magnesium treatment system (EU-120) at all times that these Hunter magnesium treatment system is in operation.~~

~~(f)~~ In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

~~D.4.8~~ **D.3.8** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions ~~D.4.1~~ **D.3.1**(d), (e), (f), (g), **and** (h), ~~and (j)~~**, D.3,2(a) and (b),** and ~~D.4.5~~ **D.3.5**, the Permittee shall perform PM and PM_{10} testing for:

~~(2)~~ **(1)** The Hunter casting cooling process (EU-315) controlled by baghouse DC-2.

~~(1)~~ **(2)** The Hunter sand system (EU-311)~~ and the Hunter shakeout process (EU-314) as well as~~**,** the core sand silo (EU-200)**,** and **the** Hunter sand storage silo (EU-203) controlled by ~~baghouses~~ **baghouse** DC-3~~ and/or DC-4~~.

(3) The Hunter sand system (EU-311) and the Hunter shakeout process (EU-314) controlled by baghouse DC-4.

~~(3)~~ **(4)** The Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) controlled by baghouse DC-5.

~~(4) The Hunter magnesium treatment system (EU-120) controlled by baghouse DC-10, within 180 days of operation of the Hunter magnesium treatment system (EU-120).~~

PM_{10} includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions ~~D.4~~ **D.3**.4(c), the Permittee shall perform VOC testing for the Hunter pouring cooling process (EU-313), Line No. 4 of the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314).

(c) In order to demonstrate compliance with Condition ~~D.4~~ **D.3**.3(b), the Permittee shall perform CO testing for the Hunter pouring cooling process (EU-313) and **the** Hunter shakeout process (EU-314).

(d) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.4.9~~**D.3.9** Visible Emissions Notations

~~(a) Visible emission notations of the Hunter sand system (EU-311)**,** and Hunter shakeout process (EU-314), Stack exhausts DC-3 and DC-4 shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) Visible emissions notations of the Hunter casting cooling (EU-315), Hunter shotblast process (EU-410) and Hunter grinding process (EU-412) associated with baghouses DC-2 and DC-5, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~

(a) Visible emission notations

(1) Visible emissions notations of the Hunter casting cooling (EU-315) associated with baghouse DC-2 shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

(2) Visible emission notations of the core sand storage silo (EU-200), the Hunter sand storage silo (EU-203) and the Hunter sand system (EU-311), Stack exhaust DC-3 shall be performed at least once per day during normal daylight operations.

(3) Visible emission notations of the Hunter sand system (EU-311) and the Hunter shakeout process (EU-314) Stack exhaust DC-4 shall be performed at least once per day during normal daylight operations.

(4) Visible emissions notations of the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) associated with baghouse DC-5 shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

~~(c)~~ **(b)** For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

~~(d)~~ **(c)** In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

~~(e)~~ **(d)** 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 visible emissions for that specific process.

~~(f)~~ **(e)** If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

~~D.4.10~~ **D.3.10** Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~(b)~~ **(a)** The Permittee shall record the pressure drop across the ~~baghouses~~ **baghouse** DC-2 ~~and DC-5~~ used in conjunction with the Hunter casting cooling process (EU-315)~~, Hunter shotblast process (EU-410) and Hunter grinding process (EU-412)~~ at least once per day when ~~these Hunter processes are~~ **this process is** in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

~~(a)~~ **(b)** The Permittee shall record the pressure drop across the ~~baghouses~~ **baghouse** DC-3 ~~and DC-4~~ used in conjunction with **the core sand storage silo (EU-200),** the Hunter sand system (EU-311)**,** and ~~Hunter shakeout system (EU-314)~~ **the Hunter sand storage silo (EU-203)** at least once per day when **any of** these ~~Hunter casting~~ processes are in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The Permittee shall record the pressure drop across the baghouse DC-4 used in conjunction with the Hunter sand system (EU-311) and the Hunter shakeout system (EU-314) at least once per day when either of these processes is in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(d) The Permittee shall record the pressure drop across the baghouse DC-5 used in conjunction with the Hunter shotblast process (EU-410) and the Hunter grinding process (EU-412) at least once per day when either of these processes is in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

~~(c) The Permittee shall record the pressure drop across baghouse DC-10 used in conjunction with the Hunter magnesium treatment system (EU-120) at least once per day when these Hunter processes are in operation and exhausting to the atmosphere.~~

~~When for any one 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

~~(d)~~ **(e)** The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.4.11~~ **D.3.11** Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.4.12~~ **D.3.12** Record Keeping Requirements

(a) To document compliance with Conditions ~~D.4.1(a) and D.4.2(a)~~ **D.3.1(a), D.3.2(a), D.3.4(a), and D.3.4(b)**, the Permittee shall maintain records of the throughput of metal to the Hunter pouring cooling process (EU-313), **the** Hunter casting cooling process (EU-315), **the Hunter shakeout process (EU-314), the** Hunter shotblast process (EU-410), **and the** Hunter grinding process (EU-412)~~, and Hunter magnesium treatment system (EU-120)~~ on a monthly basis.

(b) To document compliance with Condition ~~D.4~~ **D.3**.1(b), the Permittee shall maintain records of the throughput of sand to the Hunter face sand muller (EU-316) on a monthly basis.

~~(c) To document compliance with Conditions D.4.4(a) and D.4.4(b), the Permittee shall maintain records of the throughput of metal to the Hunter pouring cooling process (EU-313) and the Hunter shakeout process (EU-314) and Line No. 4 of the Hunter cooling Process (EU-313)on a monthly basis.~~

~~(d)~~ **(c)** To document compliance with Condition ~~D.4~~ **D.3**.1(c), the Permittee shall maintain records of the number of hours of operation of **the core sand storage silo (EU-200), the Hunter sand storage silo (EU-203),** the Hunter sand system (EU-311)**,** and **the** Hunter shakeout process (EU-314) on a monthly basis.

~~(e)~~ **(d)** To document compliance with Condition ~~D.4.9(a)~~ **D.3.9(a)(2) and (3)**, the Permittee shall maintain records of visible emission notations of Stack exhausts DC-3 and DC-4 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

~~(f)~~ **(e)** To document compliance with Condition ~~D.4.9~~(b) **D.3.9(a)(1) and (4)**, the Permittee shall maintain records of visible emission notations of the Hunter casting cooling (EU-315)**, associated with baghouse DC-2**, **and the** Hunter shotblast process (EU-410) and **the** Hunter grinding process (EU-412), associated with ~~baghouses DC-2 and~~ **baghouse** DC-5, once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not exhaust to the atmosphere).

~~(g)~~ **(f)** To document compliance with Condition ~~D.4.10(a)~~ **D.3.10(b) and (c)**, the Permittee shall maintain records once per day of the pressure drop for baghouses DC-3 and DC-4 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

~~(h)~~ **(g)** To document compliance with Condition ~~D.4.10(b)~~ **D.3.10(a) and (d)**, the Permittee shall maintain records once per day of the pressure drop for baghouses DC-2 and DC-5 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

~~(i) To document compliance with Condition D.4.10(c), the Permittee shall maintain records once per day of the pressure drop for baghouse DC-10 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).~~

~~(j)~~ **(h)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.4.13~~ **D.3.13** Reporting Requirements

A quarterly summary of the information to document compliance with Conditions ~~D.4~~ **D.3**.1(a), (b) and (c), ~~D.4.2(a), D.4~~ **D.3**.3(a), ~~D.4~~ **D.3**.4(a) and ~~D.4~~ **D.3**.4(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 6 Section D.4 has been added to the Part 70 permit to specify the requirements that pertain to Disa 1 and Disa 2 Pouring and Cooling. Permit requirements have been revised to reflect that stack D-333A always exhausts to the atmosphere. The requirements for these units now include PM and PM_{10} emission limits pursuant to 326 IAC 2-2-3 (PSD BACT). Section D.4 is added as follows:

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Disa 1 and Disa 2 Pouring and Cooling Processes

Prior to construction of Stack D-333C:

(o)(1) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(u)(1) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

After construction of Stack D-333C:

(o)(2) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, constructed in 2010, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(u)(2) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, constructed in 2010, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) The throughput of metal to the Disa 1 pouring and cooling process (EU-323) shall be limited to less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The amount of metal processed by the Disa 2 pouring and cooling process (EU-333) shall be less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total VOC emissions shall not exceed 0.80 pound per ton of metal from the Disa 1 pouring and cooling process (EU-323) and the Disa 1 casting shakeout process (EU-324) in Section D.5.

(d) The total VOC emissions shall not exceed 0.80 pound per ton of metal throughput from the Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334) in Section D.6.

(e) The total throughput of metal to the Disa 1 pouring and cooling process (EU-323), the Disa 1 casting shakeout process (EU-324) in Section D.5, the Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334) in Section D.6 shall be limited to less than 84,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) Compliance with (a) and (c) above combined with the limits in Conditions D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 1 process.

(g) Compliance with (b) and (d) above combined with the limits in Conditions D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 2 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 2 process.

(h) Compliance with (a), (b), and (c) above combined with the limits in Conditions D.5.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.4.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equation:

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:

$$E = 55\ P^{0.11} - 40$$ **where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour**

Control Devices - Stack # Emission Units	Process Weight (tons per hour)	Particulate Emission Rate (pounds per hour)
Filters - D-333A EU-323	70.0	47.8
Filters - D-333B EU-333	70.0	47.8
Filters - D-333C EU-323 EU-333	70.0 70.0	47.8 47.8 Total 95.6

D.4.3 PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 0.005 gr/dscf of exhaust air and 0.8 pound per hour.

(b) PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 2.5 pound per hour.

(c) PM emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 0.005 gr/dscf of exhaust air and 0.93 pound per hour.

(d) PM_{10} emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 2.5 pound per hour.

(e) Total CO emissions from the Disa 1 Pouring and Cooling process (EU-323), the Disa 1 Shakeout (EU-324) in Section D.5, and the Disa 1 Casting Cooling Process (EU-325) in Section D.5 combined shall not exceed 6 pounds per ton of metal throughput.

(f) Total CO emissions from the Disa 2 Pouring and Cooling process (EU-333), the Disa 2 Shakeout (EU-334) in Section D.6, and the Disa 2 Casting Cooling Process (EU-335) in Section D.6 combined shall not exceed 6 pounds per ton of metal throughput.

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the in-line filters D-333, the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333).

Compliance Determination Requirements

D.4.5 Particulate Control [326 IAC 2-7-6(6)] [326 IAC 2-2-3]

In order to comply with Conditions D.4.2, D.4.3(a), (b), (c), and (d), the in-line filters for particulate control shall be functional and control emissions from the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333) at all times that the pouring and cooling process is in operation.

D.4.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.4.2, D.4.3(a), (b), (c), and (d), the Permittee shall perform PM and PM_{10} testing for the in-line filters controlling the Disa 1 Pouring and Cooling process (EU-323) and the Disa 2 Pouring and Cooling process (EU-333).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.7 Visible Emissions Notations

(a) Visible Emission Notations:

(1) Visible emission notations of the Disa 1 pouring and cooling process (EU-323) Stack exhaust D-333A shall be performed at least once per day during normal daylight operations, and

(2) Visible emission notations of the Disa 2 pouring and cooling process (EU-333) Stack exhaust D-333B shall be performed at least once per day during normal daylight operations, or

(3) Visible emission notations of the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333) Stack exhaust D-333C shall be performed at least once per day during normal daylight operations.

A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) 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 visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.4.8 In-Line Filter Inspections

Daily inspections shall be performed to verify the placement, integrity and particulate loading of the in-line filters associated with the Disa 1 pouring and cooling process (EU-323) and the Disa 2 pouring and cooling process (EU-333). If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.9 Record Keeping Requirements

(a) To document compliance with Condition D.4.1(a), (b), and (e), the Permittee shall maintain records of the amount of metal processed by the Disa 1 Pouring and Cooling process (EU-323), the Disa 1 Shakeout (EU-324) in Section D.5, the Disa 2 Pouring and Cooling process (EU-333), the Disa 2 Shakeout (EU-334) in Section D.6, on a monthly basis.

(b) To document compliance with Condition D.4.7(a), the Permittee shall maintain records of visible emission notations of Stack exhausts D-333A and D-333B or D-333C once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.4.8, the Permittee shall maintain records of the results of the daily in-line filter inspections required under Condition D.4.8. The Permittee shall include in its daily record when a filter inspection is not performed and the reason for the lack of a filter inspection (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.1(a), (b), and (e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 7 Section D.5 of the Part 70 permit is revised as shown below. Paragraph (e) of condition D.5.4 has been removed as a result of a Joint Agreement Regarding Stay entered into by IDEM, OAQ and Rochester Metal Products Corp. on March 13, 2007 where IDEM, OAQ and Rochester Metals Corp. have agreed to make this change. Paragraph (a) of condition D.5.5 has been revised to reflect that stack DC-6/7 always exhausts to the atmosphere. The requirements for these units now include PM and PM_{10} emission limits pursuant to 326 IAC 2-2-3 (PSD BACT). The requirements for the Disa 1 Pouring and Cooling Operation have been removed from this section as they are now included in Section D.4. Section D.5 is revised as follows:

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Disa 1 Processes

~~(l)~~ **(n)** One (1) Disa 1**/Disa 2** sand system, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 60~~.0~~ tons of sand per hour.

~~(m) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10.0 tons of metal per hour and 60.0 tons of sand per hour.~~

~~(n)~~ **(p)** One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled by baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10~~.0~~ tons of metal per hour and 60~~.0~~ tons of sand per hour.

~~(o)~~ **(q)** One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6~~ and DC-8~~, exhausted to Stack DC-6/7**, and DC-8,** exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(p)~~ **(r)** One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(q)~~ **(s)** One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour total, maximum capacity: 10~~.0~~ tons of metal per hour total.

(x) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) The throughput of metal to the ~~Disa 1 pouring and cooling process (EU-323) and~~ Disa 1 casting shakeout process (EU-324) shall ~~each~~ be limited to less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total VOC emissions shall not exceed 0.80 pound per ton of metal from the Disa 1 pouring and cooling process (EU-323) **in Section D.4** and **the** Disa 1 casting shakeout process (EU-324).

(c) The total throughput of metal to the Disa 1 pouring and cooling process (EU-323) **in Section D.4**, **the** Disa 1 casting shakeout process (EU-324), **the** Disa 2 pouring and cooling process (EU-333) and the Disa 2 shakeout system (EU-334) shall be limited to less than 84,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

~~(d) Compliance with (a) and (b) renders the requirements of 326 IAC 8-1-6 not applicable.~~

~~(e) Compliance with (b) and (c) renders the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.~~

(d) Compliance with (a) and (b) above combined with the limits in Conditions D.4.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 1 process.

(e) Compliance with (b) and (c) above combined with the limits in Conditions D.4.1 and D.6.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.5.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:
Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

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

Control Devices - Stack # Emission Units	Process Weight (tons per hour)	Particulate Emission Rate (pounds per hour)
~~Filters - D-333A~~	~~70.0~~	~~47.8~~

Control Devices - Stack # Emission Units	**Process Weight (tons per hour)**	**Particulate Emission Rate (pounds per hour)**
~~EU-323~~		
Baghouses DC-6 & DC-7 - DC-6/7 EU-321 EU-324 EU-325	60~~.0~~ 70~~.0~~ 10~~.0~~	46.3 47.8 19.2 Total 113.3
Baghouse DC-8 - internal EU-411 EU-413 EU-431 EU-325	10~~.0~~ 10~~.0~~ 10~~.0~~ 10~~.0~~	19.2 19.2 19.2 19.2 Total 76.8

D.5.3 PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(c) PM emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.003 gr/dscf of exhaust air and 0.42 pound per hour.

(d) PM_{10} emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.42 pound per hour.

(e) Total CO emissions from the Disa 1 Pouring and Cooling process (EU-323) in Section D.4, the Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325) combined shall not exceed 6.0 pounds per ton of metal throughput.

~~D.5.3~~ **D.5.4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-6, DC-7 and DC-8, ~~and~~ the in-line filters D-333, ~~and~~ the Disa 1**/Disa 2** sand system (EU-321)**,** ~~and~~ **the** Disa 1 casting shakeout process (EU-324)**, the Disa 1 Shot Blast (EU-411), and the Disa 2 shotblast unit (EU-431)**.

Compliance Determination Requirements

~~D.5.4~~ **D.5.5** Particulate Control [326 IAC 2-7-6(6)] **[326 IAC 2-2-3]**

(a) In order to comply with ~~Condition~~ **Conditions** D.5.2 **and D.5.3(a) and (b)**, baghouse DC-6 for particulate control shall be in operation and control emissions from the Disa 1**/Disa 2** sand system (EU-321) and casting cooling process (EU-325) at all times that these ~~Disa 1~~ processes are in operation.

(b) In order to comply with ~~Condition~~ **Conditions** D.5.2 **and D.5.3(a) and (b)**, baghouse DC-7 for particulate control shall be in operation and control emissions from the Disa 1 casting shakeout process (EU-324) at all times that ~~this Disa 1 process is~~ **these processes are** in operation.

(c) In order to comply with ~~Condition~~ **Conditions** D.5.2 **and D.5.3(c) and (d)**, baghouse DC-8 for particulate control shall be in operation and control emissions from the Disa 1 casting cooling process(EU-325), **the Disa 1 shotblast unit** ~~shotblast process~~ (EU-411), ~~and~~ **the** Disa 1 grinding process (EU-413)**, and the Disa 2 shotblast unit (EU-431)** at all times that these ~~Disa 1~~ processes are in operation.

(d) ~~In order to comply with Condition D.5.2, the in-line filters for particulate control shall be functional and control emissions from the Disa 1 pouring and cooling process (EU-323) at all times that the pouring and cooling process is in operation.~~

~~(e)~~ In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.5.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.5.3, the Permittee shall perform PM and PM_{10} testing for the baghouse DC-6 controlling the Disa 1/Disa 2 Sand System (EU-321) and the Disa 1 Casting Cooling (EU-325), baghouse DC-7 controlling the Disa 1 Shakeout (EU-324), and the baghouse DC-8 controlling the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 1 Grinding (EU-413), and the Disa 2 Shot Blast (EU-431).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.5.6~~ **D.5.7** Visible Emissions Notations

~~(a) Visible emission notations of the Disa 1/ sand system (EU-321), Disa 1 pouring and cooling process (EU-323), Disa 1 casting shakeout process (EU-324) and Disa 1 casting cooling process (EU-325), Stack exhausts DC-6/7 and D-333A shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) Visible emissions notations of the Disa 1 casting cooling process (EU-325), Disa 1 shotblast unit (EU-411) and Disa 1 grinding process (EU-413) controlled by baghouse DC-8, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~

(a) Visible emission notations:

(1) Visible emission notations of the Disa 1/Disa 2 sand system (EU-321), Disa 1 casting shakeout process (EU-324) and Disa 1 casting cooling process (EU-325), Stack exhaust DC-6/7 shall be performed at least once per day during normal daylight operations.

(2) Visible emissions notations of the Disa 1 casting cooling process (EU-325), the Disa 1 shotblast unit (EU-411), the Disa 1 grinding process (EU-413), and the Disa 2 Shotblast unit (EU-431) controlled by baghouse DC-8, shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

~~(c)~~ **(b)** For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

~~(d)~~ **(c)** In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

~~(e)~~ **(d)** 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 visible emissions for that specific process.

~~(f)~~**(e)** If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

~~D.5.7~~ **D.5.8** Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouse DC-6 used in conjunction with the Disa 1 sand system (EU-321) and **the** Disa 1 casting cooling (EU-325) at least once per day when these Disa 1 processes are in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the baghouse DC-7 used in conjunction with the Disa 1 casting shakeout process (EU-324) at least once per day when this Disa 1 process is in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The Permittee shall record the pressure drop across the baghouse DC-8 used in conjunction with the Disa 1 casting cooling process (EU-325), the Disa 1 shotblast unit (EU-411)**,** ~~and~~ the Disa 1 grinding process (EU-413)**, and the Disa 2 Shotblast unit (EU-431)** at least once per day when these Disa 1 processes are in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(d) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

~~D.5.8~~ **D.5.9** Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

~~D.5.9 In-Line Filter Inspections~~

~~Daily inspections shall be performed to verify the placement, integrity and particulate loading of the in-line filters associated with the Disa 1 pouring and cooling process (EU-323). If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.10 Record Keeping Requirements

(a) To document compliance with Conditions D.5.1(a)**,** ~~and~~ D.5.1(c), the Permittee shall maintain records of the amount of metal processed by the Disa 1 pouring and cooling (EU-323) **in Section D.4**, **the** Disa 1 casting shakeout process (EU-324), and Disa 1 casting cooling process (EU-325) on a monthly basis.

(b) To document compliance with Condition ~~D.5.5(a)~~**D.5.7(a)**, the Permittee shall maintain records of visible emission notations of Stack ~~exhausts~~ **exhaust** DC-6/7 ~~and D-333A~~ once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition ~~D.5.5(b)~~**D.5.7(b)**, the Permittee shall maintain records of visible emission notations of the Disa 1 casting cooling process (EU-325), **the** Disa 1 shotblast unit (EU-411)~~ and ~~**, the** Disa 1 grinding process (EU-413)**, and the Disa 2 Shotblast unit (EU-431)** controlled by baghouse DC-8, once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not exhaust to the atmosphere).

(d) To document compliance with Conditions ~~D.5.6(a) and D.5.6(b)~~**D.5.8(a) and D.5.8(b)**, the Permittee shall maintain records once per day of the pressure drop for baghouses DC-6 and DC-7 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(e) To document compliance with Condition ~~D.5.6(c)~~**D.5.8(c)**, the Permittee shall maintain records once per day of the pressure drop for baghouse DC-8 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

(f) ~~To document compliance with Condition D.5.8, the Permittee shall maintain records of the results of the daily in-line filter inspections required under Condition D.5.8. The Permittee shall include in its daily record when a filter inspection is not performed and the reason for the lack of a filter inspection (e.g. the process did not operate that day).~~

~~(g)~~ All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1(a) and D.5.1(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 8 Section D.6 of the Part 70 permit is revised to include PM and PM_{10} emission limits pursuant to 326 IAC 2-2-3 (PSD BACT). The requirements for the Disa 2 Pouring and Cooling Operation have been removed from this section as they are now included in Sections D.4.1 and D.4.2. Section D.6 is revised as follows:

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Disa 2 Processes

~~(r)~~ **(t)** One (1) Disa 2 sand ~~system~~ **muller**, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 60~~.0~~ tons of sand per hour.

~~(s) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10.0 tons of metal per hour and 60.0 tons of sand per hour.~~

~~(t)~~ **(v)** One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10~~.0~~ tons of metal per hour and 60~~.0~~ tons of sand per hour.

~~(u)~~ **(w)** One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour, maximum capacity: 10~~.0~~ tons of metal per hour.

~~(v) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6.0 tons of metal per hour, maximum capacity: 10.0 tons of metal per hour.~~

~~(w)~~ **(y)** One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6~~.0~~ tons of metal per hour total, maximum capacity: 10~~.0~~ tons of metal per hour total.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

(a) The amount of metal processed by the Disa 2 pouring and cooling process (EU-333) **in Section D.4** and the Disa 2 shakeout system (EU-334) shall each be less than 62,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total VOC emissions shall not exceed 0.80 pound per ton of metal throughput from the Disa 2 pouring and cooling process (EU-333) **in Section D.4** and the Disa 2 shakeout system (EU-334).

(c) The total throughput of metal to the Disa 2 pouring and cooling process (EU-333) **in Section D.4,** ~~and~~ the Disa 2 shakeout system (EU-334), **the** Disa 1 pouring and cooling process (EU-323) **in Section D.4,** and the Disa 1 casting shakeout process (EU-324), shall be limited to less than 84,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

~~(d) Compliance with (a) and (b) renders the requirements of 326 IAC 8-1-6 not applicable.~~

~~(e) Compliance with (b) and (c) renders the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.~~

(d) Compliance with (a) and (b) above combined with the limits in Conditions D.4.1 and D.5.1 shall limit the potential to emit VOC from the Disa 2 process to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 not applicable to the Disa 2 process.

(e) Compliance with (b) and (c) above combined with the limits in Conditions D.4.1 and D.5.1 shall limit the potential to emit VOC from the Disa 1 and Disa 2 processes to less than forty (40) tons per year of VOC, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the Disa 1 and Disa 2 processes for VOC.

D.6.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

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

Control Devices - Stack # **Emission Units**	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
~~In-Line Filters - D-333B~~ ~~EU-333~~	~~70.0~~	~~47.8~~
~~Baghouse DC-8 – internal~~ ~~EU-411~~ ~~EU-413~~ ~~EU-431~~ ~~EU-325~~	~~10.0~~ ~~10.0~~ ~~10.0~~ ~~10.0~~	~~19.2~~ ~~19.2~~ ~~19.2~~ ~~19.2~~ ~~Total 76.8~~
Baghouse DC-11 - DC-11 EU-331 EU-334	60~~.0~~ 70~~.0~~	46.3 47.8 Total 94.1
Baghouse DC-12 – internal EU-335 EU-433	10~~.0~~ 10~~.0~~	19.2 19.2 Total 38.4

D.6.3 PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the baghouse DC-11 controlling emissions from the Disa 2 Sand Muller (EU-331) and Disa 2 Shakeout (EU-334) shall not exceed 0.003 gr/dscf of exhaust air and 1.21 pounds per hour.

(b) PM_{10} emissions from the baghouse DC-11 controlling emissions from the Disa 2 Sand Muller (EU-331) and Disa 2 Shakeout (EU-334) shall not exceed 1.0 pounds per hour.

(c) PM emissions from the baghouse DC-12 controlling emissions from Disa 2 Casting Cooling (EU-335) and Disa 2 Grinding (EU-433) shall not exceed 0.003 gr/dscf of exhaust air and 0.84 pound per hour.

(d) PM_{10} emissions from the baghouse DC-12 controlling emissions from Disa 2 Casting Cooling (EU-335) and Disa 2 Grinding (EU-433) shall not exceed 0.84 pound per hour.

(e) Total CO emissions from the Disa 2 Pouring and Cooling process (EU-333) in Section D.4, the Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335) combined shall not exceed 6.0 pounds per ton of metal throughput.

~~D.6.3~~ **D.6.4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, baghouses DC-8, DC-11, DC-12 ~~and the in-line filters D-333~~, the Disa 2 sand ~~system~~ **muller** (EU-331) and Disa 2 shakeout system (EU-334).

Compliance Determination Requirements

~~D.6.4~~ **D.6.5** Particulate Control [326 IAC 2-7-6(6)] **[326 IAC 2-2-3]**

~~(a) In order to comply with Condition D.6.2, baghouse DC-8 for particulate control shall be in operation and control emissions from the Disa 2 shotblast unit (EU-431) at all times that this Disa 2 process is in operation.~~

~~(b)~~ **(a)** In order to comply with ~~Condition~~ **Conditions** D.6.2 **and D.6.3**, baghouse DC-11 for particulate control shall be in operation and control emissions from the Disa 2 sand ~~system~~ **muller** (EU-331) and Disa 2 shakeout system (EU-334) at all times that either of these Disa 2 processes are in operation.

~~(c)~~ **(b)** In order to comply with ~~Condition~~ **Conditions** D.6.2 **and D.6.3**, baghouse DC-12 for particulate control shall be in operation and control emissions from the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) at all times that these Disa 2 processes are in operation.

~~(d) In order to comply with Condition D.6.2, the in-line filters for particulate control shall be functional and control emissions from the Disa 2 pouring and cooling process (EU-333) at all times that the pouring and cooling process is in operation.~~

~~(e) Pursuant to CP 049-4112-00002, issued on July 3, 1995, the emissions from baghouse DC-8 shall be recirculated through secondary filters prior exhausting to the building interior.~~

~~(f)~~ **(c)** In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.6.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.3, the Permittee shall perform PM and PM_{10} testing for the baghouse DC-11 controlling the Disa 2 sand muller (EU-331) and Disa 2 shakeout system (EU-334), and for the baghouse DC-12 controlling the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433).

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.6.5~~ **D.6.7** Visible Emissions Notations

~~(a) Visible emission notations of the Disa 2 sand system (EU-331) and Disa 2 shakeout system (EU-334) and the Disa 2 pouring and cooling process (EU-333) Stack exhausts DC-11 and D-333B shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) Visible emissions notations of the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) controlled by baghouse DC-12 and the Disa 2 shotblast unit (EU-431) controlled by baghouse DC-8 shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~

(a) Visible emission notations:

(1) Visible emission notations of the Disa 2 sand system (EU-331) and the Disa 2 shakeout system (EU-334) Stack exhausts DC-11 shall be performed at least once per day during normal daylight operations.

(2) Visible emissions notations of the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) controlled by baghouse DC-12 shall be performed once per day during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

~~(c)~~ **(b)** For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

~~(d)~~ **(c)** In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

~~(e)~~ **(d)** 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 visible emissions for that specific process.

~~(f)~~ **(e)** If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

~~D.6.6~~ **D.6.8** Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across baghouse DC-11 used in conjunction with the Disa 2 sand ~~system~~ **muller** (EU-331) and Disa 2 shakeout system (EU-334) at least once per day when these Disa 2 processes are in operation.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) ~~The Permittee shall record the pressure drop across baghouse DC-8 used in conjunction with the Disa 2 shotblast unit (EU-431) at least once per day when this Disa 2 process is in operation and exhausting to the atmosphere.~~

~~When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

~~(c)~~ The Permittee shall record the pressure drop across baghouse DC-12 used in conjunction with the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433) at least once per day when these Disa 2 processes are in operation and exhausting to the atmosphere.

When for any one reading, the pressure drop across a baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

~~(d)~~ **(c)** The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

~~D.6.7~~ **D.6.9** Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

~~D.6.8 In-Line Filter Inspections~~

~~Daily inspections will be performed to verify the placement, integrity and particulate loading of the in-line filters associated with the Disa 2 pouring and cooling process (EU-333). If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.6.9~~ **D.6.10** Record Keeping Requirements

(a) To document compliance with Conditions D.6.1(a) and D.6.1(c) the Permittee shall maintain records of the amount of metal processed by the Disa 2 pouring and cooling (EU-333) **in Section D.4**, the Disa 2 shakeout system (EU-334), and the Disa 2 Casting Cooling Process (EU-335) on a monthly basis.

(b) To document compliance with Condition ~~D.6.5(a)~~ **D.6.7(a)**, the Permittee shall maintain records of visible emission notations of Stack ~~exhausts~~ **exhaust** DC-11 ~~and D-333B~~ once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition ~~D.6.5(b)~~ **D.6.7(b)**, the Permittee shall maintain records of visible emission notations of the Disa 2 casting cooling process (EU-335) and Disa 2 grinding process (EU-433), controlled by baghouse DC-12 ~~and Disa 2 shotblast unit (EU-431) controlled by baghouse DC-8~~, once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not exhaust to the atmosphere).

(d) To document compliance with Condition ~~D.6.6(a)~~ **D.6.8(a)**, the Permittee shall maintain records once per day of the pressure drop for baghouse DC-11 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

~~(e) To document compliance with Condition D.6.6(b), the Permittee shall maintain records once per day of the pressure drop for baghouse DC-8 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).~~

~~(f)~~ **(e)** To document compliance with Condition ~~D.6.6(c)~~ **D.6.8(c)**, the Permittee shall maintain records once per day of the pressure drop for baghouse DC-12 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

~~(g) To document compliance with Condition D.6.8, the Permittee shall maintain records of the results of the daily in-line filter inspections required under Condition D.6.8. The Permittee shall include in its daily record when a filter inspection is not performed and the reason for the lack of a filter inspection (e.g. the process did not operate that day).~~

~~(h)~~ **(f)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.6.10~~ **D.6.11** Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(a) and D.6.1(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 9 Section D.7 of the Part 70 permit is revised to clarify when the Preventive Maintenance Plan (PMP) is required. The requirements for the core sand storage silos have been removed from this section as they are now included in other sections of the permit. Section D.7 is revised as follows:

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Phenolic Urethane Cold Box Core Production System

~~(x) One (1) core sand storage silo, identified as EU-200, constructed in 1979, controlled by baghouse DC-3, exhausted to Stack DC-3, capacity: 10 tons of sand per hour, storage capacity: 54.0 tons of core sand.~~

~~(y) One (1) core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30.0 tons of core sand and 0.85 tons of core sand per hour.~~

~~(z)~~ **(ee)** Six (6) phenolic urethane cold box core machines, which produce cores using a nominal mix of 20 pounds of phenolic urethane resins per ton of cores produced and 2~~.0~~ pounds of a non-HAP gas as a catalyst per ton of cores, emissions uncontrolled, consisting of the following:

(1) EU-212a, constructed in 1989, served by mixer A, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(2) EU-212b, constructed in 1991, served by mixer B, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(3) EU-212c, constructed in 1993, served by mixer C, mixer capacity: 0.7 tons of sand and resins per hour, core machine capacity: 0.7 tons of cores per hour.

(4) EU-213, constructed in 1996, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(5) EU-231a, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.25 tons of cores per hour.

(6) EU-231b, constructed in 1997, served by mixer D, mixer capacity: 0.9 tons of sand and resins per hour, core machine capacity: 0.35 tons of cores per hour.

~~(aa)~~ **(ff)** One (1) core wash operation (dip tank), identified as EU-503, constructed in 1972, emissions uncontrolled, nominal capacity: 2.8 tons of core per hour and 5.7~~0~~ pounds of core wash per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

~~D.7.1 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]~~

~~(a) Core sand storage silo (EU-200) shall not exceed 6,500 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(b) Stack DC-3 emissions from the core sand storage silo (EU-200), and the Hunter sand system (EU-311) and the Hunter sand storage silo (EU-203) of Section D.4 shall not exceed:~~

~~(1) 3.00 pounds of PM per hour, and~~

~~(2) 3.00 pounds of PM_{10} per hour.~~

~~Compliance with these limits combined with the limits in Conditions D.4.1 and D.9.1 shall limit the potential to emit PM and PM_{10} from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of PM and PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.~~

~~D.7.2~~ **D.7.1** Volatile Organic Compounds (VOC) [326 IAC 8-1-6] ~~[326 IAC 2-2]~~

VOC delivered to the core wash operation (EU-503) shall be less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits combined with the limits in Condition ~~D.4~~ **D.3**.3 shall limit the potential to emit VOC from ~~the facilities constructed prior to 1996~~ **the core wash operation (EU-503)**, to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 ~~and 326 IAC 2-2 (PSD)~~ not applicable to ~~the facilities constructed prior to 1996~~ **the core wash operation (EU-503)**.

~~D.7.3 Particulate [326 IAC 6-3-2]~~

~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:~~

~~Interpolation 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:~~

~~$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and~~
~~P = 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:~~

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

~~**Control Device - Stack # Emission Units**~~	~~**Process Weight** (tons per hour)~~	~~**Particulate Emission Rate** (pounds per hour)~~
~~Bin Vent Filter - Bin Vent EU-201~~	~~0.85~~	~~3.68~~
~~Baghouse DC-3 - DC-3~~ ~~EU-200~~ ~~EU-203~~ ~~EU-311~~	~~10.0~~ ~~10.0~~ ~~100~~	~~19.2~~ ~~19.2~~ ~~51.3~~ ~~Total 89.7~~

~~D.7.4~~ **D.7.2** Resins and Catalysts PSD and VOC BACT Minor Limits [326 IAC 2-2] [326 IAC 8-1-6]

(a) The six (6) phenolic urethane cold box core machines shall not use resins and/or catalysts that contain any triethylamine (TEA). Compliance with this TEA content limitation shall render the requirements of 40 CFR 63, Subpart EEEEE not applicable to the core machines.

(b) The total resin usage in the three (3) phenolic urethane cold box core machines identified as EU-213, EU-231a and EU-231b shall not exceed 84,000 pounds per twelve (12) consecutive period with compliance determined at the end of each month.

(c) VOC shall not exceed 0.05 pounds per pound of resin.

(d) The total ~~DMEA~~ catalyst gas usage in the three (3) phenolic urethane cold box core machines identified as EU-213, EU-231a and EU-231b shall not exceed 6,000 pounds per twelve (12) consecutive period with compliance determined at the end of each month.

(e) VOC emissions are 1 pound per pound of ~~DMEA~~ catalyst gas.

(f) Compliance with the limits specified in (b) through (e) render the requirements of 326 IAC 2-2 not applicable to the Disa 1 and Disa 2 lines and also render the requirements of 326 IAC 8-1-6 not applicable.

~~D.7.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices, DC-3 and the bin vent filters, and any facilities associated with the catalysts.~~

Compliance Determination Requirements

~~D.7.6 Particulate Control [326 IAC 2-7-6(6)]~~

~~(a) In order to comply with Conditions D.7.1(b) and D.7.3, baghouse DC-3 for particulate control shall be in operation and control emissions from the core sand storage silo (EU-200) at all times that the silo loading and unloading is in operation.~~

~~(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.~~

~~D.7.7~~ **D.7.3** Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

Compliance with the VOC usage limitations contained in Condition ~~D.7.2~~ **D.7.1** shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

~~D.7.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]~~

~~(a) In order to demonstrate compliance with Conditions D.7.1(b) and D.7.3, the Permittee shall perform PM and PM_{10} testing for the core sand silo (EU-200) and the Hunter sand system (EU-311), and Hunter sand storage silo (EU-203) in Section D.8 all controlled by baghouse DC-3.~~

~~(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.~~

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.7.9 Visible Emissions Notations~~

~~(a) Visible emission notations of the core sand storage silo (EU-200) Stack exhaust DC-3 shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) 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 visible emissions for that specific process.~~

~~(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.~~

~~D.7.10 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

~~The Permittee shall record the pressure drop across the baghouse DC-3 used in conjunction with the core sand storage silo (EU-200) at least once per day when the silo loading and unloading is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

~~The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

~~D.7.11 Broken or Failed Bag Detection~~

~~(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.7.12~~ **D.7.4** Record Keeping Requirements

(a) ~~To document compliance with Condition D.7.1(a), the Permittee shall maintain records of the number of hours of operation of the core sand storage silo (EU-200) on a monthly basis.~~

~~(b)~~ To document compliance with Condition ~~D.7.4~~ **D.7.2**, the Permittee shall maintain records of the amount of resins and ~~DMEA~~ catalyst gas used on a monthly basis.

~~(c)~~ **(b)** To document compliance with Condition ~~D.7.2~~ **D.7.1**, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition ~~D.7.2~~ **D.7.1**. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.

(1) The VOC content of each material used.

(2) The amount of material less water used on monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(3) The weight of VOCs emitted for each compliance period.

~~(d) To document compliance with Condition D.7.9(a), the Permittee shall maintain records of visible emission notations of Stack exhaust DC-3 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).~~

~~(e) To document compliance with Condition D.7.10, the Permittee shall maintain records once per day of the pressure drop for baghouse DC-3 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).~~

~~(f)~~ **(c)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.7.13~~ **D.7.5** Reporting Requirements

A quarterly summary of the information to document compliance with Conditions ~~D.7.1(a), D.7.2, D.7.4(b) and D.7.4(d)~~ **D.7.1, D.7.2(b), and D.7.2(d)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 10 Section D.8 of the Part 70 permit is revised to include PM and PM_{10} emission limits pursuant to 326 IAC 2-2-3 (PSD BACT). The requirement for baghouse DC-10 to be routed through secondary filters prior to exhausting to the building interior is no longer applicable since the primary baghouse is used for control and the efficiency for secondary filter is not included for any emission limits. This section now includes the requirements for the Hunter magnesium treatment process as this unit is also controlled by baghouse DC-10. Section D.8 is revised as follows:

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Magnesium Treatment System

(cc) One (1) Hunter magnesium treatment system, identified as EU-120, permitted in 2009, controlled by baghouse DC-10, exhausted internally, nominal capacity: 10.3 tons of metal per hour.

~~(bb)~~ **(dd)** One (1) **Disa** magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 VOC PSD Minor Limits [326 IAC 2-2] [326 IAC 8-1-6]

(a) The amount of ductile iron treated in the **Disa** magnesium treatment system (EU-119) shall not exceed 100,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from the **Disa** magnesium treatment system (EU-119) shall not exceed 0.005 pounds per ton of metal treated.

Compliance with these limits shall limit the potential to emit VOC from the **Disa** magnesium treatment system (EU-119) to less than twenty-five (25) tons per year of VOC, and shall render the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 (PSD) not applicable.

D.8.2 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]

(a) The amount of metal processed by the Hunter magnesium treatment system (EU-120) shall not exceed 16,600 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Stack DC-10 emissions from the Hunter magnesium treatment system (EU-120) shall not exceed:

(1) 3.0 pounds of PM per ton of metal throughput, and

(2) 1.8 pounds of PM_{10} per ton of metal throughput.

Compliance with these limits shall limit the potential to emit PM and PM_{10} from Stack DC-10 from the Hunter magnesium treatment system (EU-120), to less than twenty-five (25) tons per year of PM, and less than fifteen (15) tons per year of PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to add the Hunter magnesium treatment system (EU-120).

D.8.3 PM and PM_{10} PSD BACT Requirements [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.003 gr/dscf of exhaust air and 0.13 pound per hour.

(b) **PM_{10} emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.13 pound per hour.**

~~D.8.2~~ **D.8.4** Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the ~~following individual emission unit~~ **Disa magnesium treatment system (EU-119), the Hunter magnesium treatment system (EU-120),** and the ~~control device~~ **baghouse (DC-10)** shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

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

Emission Unit/Control Device - Stack #	Process Weight (tons per hour)	Allowable PM Emission Rate (pounds per hour)
DC-10 - DC-10		
EU-119	20~~.0~~	30.5
EU-120	**10.3**	**19.56**

~~D.8.3~~ **D.8.5** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the **Disa magnesium treatment system (EU-119), the Hunter magnesium treatment system (EU-120),** and the control device, baghouse DC-10.

Compliance Determination Requirement

~~D.8.4~~ **D.8.6** Particulate Control [326 IAC 2-7-6(6)] **[326 IAC 2-2-3]**

(a) ~~Pursuant to CP-049-4112-00002, issued on issued on July 3, 1995, and CP 049-8548-00002, issued on October 17, 1997, and in~~ **In** order to comply with ~~Condition D.8.2~~ **Conditions D.8.2, D.8.3, and D.8.4**, baghouse DC-10 for particulate control shall be in operation and control emissions from the **Disa** magnesium treatment system (EU-119) **and the Hunter magnesium treatment system (EU-120)** at all times that ~~the~~ **either** magnesium treatment system process is in operation.

(b) ~~Pursuant to CP-049-4112-00002, issued on July 3, 1995, the emissions from baghouse DC-10 shall be recirculated through secondary filters prior to exhausting to the building interior.~~

~~(c)~~ In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

~~D.8.5~~ **D.8.7** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with ~~Condition D.7.2~~ **Conditions D.8.2, D.8.3, and D.8.4**, the Permittee shall perform PM and PM_{10} testing for **the Disa** magnesium treatment system (EU-119) **and the Hunter magnesium treatment system (EU-120),** controlled by baghouse DC-10**, within 180 days of operation of the Hunter magnesium treatment system (EU-120)**.

(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.8.6~~ **D.8.8** Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the baghouse DC-10 used in conjunction with the **Disa** magnesium treatment system (EU-119) **and the Hunter magnesium treatment system (EU-120)** at least once per day when the magnesium process is in operation and exhausting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

~~D.8.7~~ **D.8.9** Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.8.8~~ **D.8.10** Record Keeping Requirements

(a) To document compliance with Condition D.8.1(a), the Permittee shall maintain records of the amount of ductile iron treated in the **Disa** magnesium treatment system (EU-119) on a monthly basis.

(b) **To document compliance with Condition D.8.2(a), the Permittee shall maintain records of the amount of ductile iron treated in the Hunter magnesium treatment system (EU-120) on a monthly basis.**

(c) To document compliance with Condition ~~D.8.6~~ **D.8.8**, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not exhaust to the atmosphere).

~~(c)~~ **(d)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.8.9~~ **D.8.11** Reporting Requirements

A quarterly summary of the information to document compliance with ~~Condition D.8.1(a)~~ **Conditions D.8.1(a) and D.8.2(a)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 11 Section D.9 of the Part 70 permit is revised to include PM and PM_{10} emission limits pursuant to 326 IAC 2-2-3 (PSD BACT). This section now includes the requirements for all sand storage silos using only bin vents for control of particulate emissions. Section D.9 is revised as follows:

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Storage Silos

(z) One (1) Disa core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30 tons of core sand and 0.85 tons of core sand per hour.

~~(cc)~~ **(aa)** One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, **constructed in 1996,** controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.

~~(dd) One (1) Hunter sand storage silo, identified as EU-203, controlled by baghouse DC-3, capacity: 10 tons of sand per hour.~~

~~(ee)~~ **(m)** One (1) Hunter bond storage silo, identified as EU-204, **constructed in 1980,** controlled by a bin vent filter, capacity: 10 tons of bond per hour

~~(ff)~~ **(bb)** One (1) Disa New Sand Day Bin, **identified as EU-DNS, constructed in 1996,** controlled by a bin vent, internally vented, ~~constructed in 1996,~~ capacity: 10 tons of sand and 66 tons of sand per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 PM and PM_{10} PSD Minor Limits [326 IAC 2-2]

(a) The amount of bond throughput to the Hunter bond storage silo (EU-204) shall not exceed 10,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

~~(b) The Hunter sand storage silo (EU-203) shall not exceed 6,500 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(c) Stack DC-3 emissions from the Hunter sand storage silo (EU-203) and the core sand storage silo (EU-200) and the Hunter sand system (EU-311) of Section D.4 shall not exceed:~~

~~(1) 3.00 pounds of PM per hour, and~~

~~(2) 3.00 pounds of PM_{10} per hour.~~

~~(d)~~ **(b)** Emissions from the Hunter bond storage silo (EU-204) shall not exceed:

(1) 0.08~~0~~ pounds of PM per ton, and

(2) 0.08~~0~~ pounds of PM_{10} per ton.

Compliance with these limits combined with the limits in **Condition D.3.1** ~~Conditions D.4.1 and D.7.1~~ shall limit the potential to emit PM and PM_{10} from the facilities constructed prior to 1996, to less than one hundred (100) tons per year of PM and PM_{10}, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the facilities constructed prior to 1996.

D.9.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following individual emission units and the control devices shall not exceed the pound per hour emission rate calculated using the following equations:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55.\cancel{0}\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Control Device - Stack # Emission Units	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)

Control Device - Stack # Emission Units	**Process Weight** (tons per hour)	**Particulate Emission Rate** (pounds per hour)
~~Baghouse DC-3 - DC-3 EU-203 EU-200 EU-311~~	~~10.0 10.0 100~~	~~19.2 19.2 51.3 Total 89.7~~
Bin Vent Filter - Bin Vent EU-201	**0.85**	**3.68**
Bin Vent Filter - Bin Vent EU-202	20	30.5
Bin Vent Filter - Bin Vent EU-204	10	19.2
Bin Vent Filter - Bin Vent Disa New Sand Day Bin	66	47.2

D.9.3 PM and PM_{10} PSD BACT Requirements [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3 (PSD BACT) and SSM 049-24381-00002, the following limits shall apply:

(a) PM emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.003 gr/dscf of exhaust air and 0.001 pound per hour.

(b) PM_{10} emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.001 pound per hour.

(c) PM emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(d) PM_{10} emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.04 pound per hour.

(e) PM emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(f) PM_{10} emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.04 pound per hour.

~~D.9.3~~ **D.9.4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the ~~control devices, DC-3 and the~~ bin vent filters **and the Disa core sand storage silo (EU-201), the Disa Sand and Bond Silos (EU-202), the Hunter bond storage silo (EU-204), and the Disa New Sand Day Bin (EU-DNS)**.

Compliance Determination Requirement

~~D.9.4~~ **D.9.5** Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Conditions D.9.1(d), D.9.2, and D.9.3, the bin vent filters for particulate control shall be in operation and control emissions from the Disa core sand storage silo (EU-201), the Disa Sand and Bond Silos (EU-202), the Hunter bond storage silo (EU-204), and the Disa New Sand Day Bin (EU-DNS) at all times that loading and unloading is in operation.

~~(a) In order to comply with Conditions D.9.1(c) and D.9.2, the baghouse DC-3 for particulate control shall be in operation and control emissions from the Hunter sand storage silo (EU-203) at all times that the this silo is in operation.~~

~~(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.~~

~~D.9.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]~~

~~(a) In order to demonstrate compliance with Conditions D.9.1(c) and D.9.2, the Permittee shall perform PM and PM_{10} testing for the Hunter sand storage silo (EU-203) and the core sand silo (EU-200) and the Hunter sand system (EU-311) both in Section D.3 all controlled by baghouse DC-3.~~

~~(b) This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.~~

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.9.6 Visible Emissions Notations~~

~~(a) Visible emission notations of the Hunter sand storage silo (EU-203) Stack exhaust DC-3 shall be performed at least once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) 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 visible emissions for that specific process.~~

~~(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.~~

~~D.9.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

~~The Permittee shall record the pressure drop across the baghouse DC-3 used in conjunction with the Hunter sand storage silo (EU-203) at least once per day when the silo loading and unloading is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~

~~The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

~~D.9.8 Broken or Failed Bag Detection~~

~~(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.9.9~~ **D.9.6** Record Keeping Requirements

(a) To document compliance with Condition D.9.1(a), the Permittee shall maintain records of the amount of bond processed by the Hunter bond storage silo (EU-204) on a monthly basis.

~~(b) To document compliance with Condition D.9.1(b), the Permittee shall maintain records of the number of hours of operation of the Hunter sand storage silo (EU-203) on a monthly basis.~~

~~(c) To document compliance with Condition D.9.6, the Permittee shall maintain records of visible emission notations of Stack exhaust DC-3 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).~~

~~(d) To document compliance with Condition D.9.7, the Permittee shall maintain records once per day of the pressure drop for baghouse DC-3 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).~~

~~(e)~~ **(b)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.9.10~~ **D.9.7** Reporting Requirements

A quarterly summary of the information to document compliance with **Condition** ~~Conditions~~ D.9.1(a) ~~and D.9.1(b)~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 12 Section D.10 of the Part 70 permit is revised as follows:

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Insignificant Activities

(b) One (1) electric induction holding furnace, identified as EU-113**, constructed in 1996** [326 IAC 6-3-2].

(c) One (1) pattern shop operation, equipped with a baghouse at 2,000 cubic feet per minute and 0.03 grains per dry standard cubic feet, ~~installed~~ **constructed** in 1997 [326 IAC 6-3-2].

(d) One (1) **Hunter** sample shotblast operation, equipped with a baghouse at 1,500 cubic feet per minute and 0.03 grains per dry standard cubic feet ~~installed~~ **constructed** in 2001 [326 IAC 6-3-2].

(e) One (1) dry ice blast operation, equipped with a 2,000 cubic feet per minute blower attached to a filter, exhausted internally, ~~installed~~ **constructed** in 2003 [326 IAC 6-3-2].

(f) One (1) **Disa** sample shotblast **operation**~~ in the Disa plant~~, equipped with a 1,000 cubic feet per minute ~~dust collector~~ **baghouse**, deemed an insignificant activity**, constructed in 1996** [326 IAC 6-3-2].

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rates from the ~~above insignificant activities, items (b) through (f),~~ **electric induction holding furnace (EU-113), the pattern shop operation, the Hunter sample shotblast operation, the dry ice blast operation, the Disa sample shotblast operation,** and **the associated** control devices shall not exceed the pound per hour emission ~~rates when operating at a given process weight rate in tons per hour calculated using one (1) of the two (2) following equations~~ **rate calculated using the following equations**:

Interpolation 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:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = 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:

$E = 55\cancel{.0}\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirement

D.10.2 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Condition D.10.1, the control equipment for particulate control shall be in operation and control emissions from the pattern shop operation and the sample shotblast operation at all times that the these insignificant activities are in operation.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Change No. 13 Condition E.1.2 is revised as follows to correct the list of applicable provisions of 40 CFR Part 63, Subpart EEEEE:

E.1.2 National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Requirements [326 IAC 20-92-1] [40 CFR Part 63, Subpart EEEEE]

Pursuant to 40 CFR Part 63, Subpart EEEEE, the Permittee shall comply with the following provisions of the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries, which are included as Attachment A and incorporated by reference as 326 IAC 20-92 for preheaters, metal melt furnaces, and pouring and cooling processes, identified as EU-118, EU-114, EU-115, EU-131, EU-132, EU-133, EU-313, EU-323 and EU-333 with a compliance date of April 22, 2005:

(a) 40 CFR 63.7680
(b) 40 CFR 63.7681
(c) 40 CFR 63.7682(a-c)
(d) 40 CFR 63.7683(a-c) and (f)
(e) 40 CFR 63.7690(a)(1)(i-ii), (a)(5)(i-ii), and (a)(7)
(f) 40 CFR 63.7700(a), (b), and (e)~~(1-2)~~
(g) 40 CFR 63.7710(a), (b)(1), (b)(3), (b)(4-6)
(h) 40 CFR 63.7720
(i) 40 CFR 63.7730(a) **and (b)**
(j) 40 CFR 63.7731
(k) 40 CFR 63.7732(a), (b)(1**-2**), (b)(~~3-5~~ **4-6**), (c)(1**-2**), (c)(~~3-5~~ **4-6**), (d), ~~and~~ (h)**, and (i)**
~~(l) 40 CFR 63.7733(a), (e), anf (f)~~
~~(m)~~ **(l)** 40 CFR 63.7734(a)(1), (a)(5), and (a)(7)
~~(n)~~ **(m)** 40 CFR 63.7735(a) and (d)
~~(o)~~ **(n)** 40 CFR 63.7736**(c) and (d)**
~~(p)~~ **(o)** 40 CFR 63.7740~~(a) and~~ (b) **and (c)**
~~(q)~~ **(p)** 40 CFR 63.7741~~(a),~~ (b)~~,~~ and (f)
~~(r)~~ **(q)** 40 CFR 63.7742
~~(s)~~ **(r)** 40 CFR 63.7743(a)(1), (a)(5), (a)(7), ~~(a)(9),~~ (a)(12)~~, (b)~~ and (c)
~~(t)~~ **(s)** 40 CFR 63.7744(a) and (c)
~~(u)~~ **(t)** 40 CFR 63.7745
~~(v)~~ **(u)** 40 CFR 63.7746
~~(w)~~ **(v)** 40 CFR 63.7747
~~(x)~~ **(w)** 40 CFR 63.7750(a), (b), (d), and (e)
~~(y)~~ **(x)** 40 CFR 63.7751
~~(z)~~ **(y)** 40 CFR 63.7752
~~(aa)~~ **(z)** 40 CFR 63.7753
~~(bb)~~ **(aa)** 40 CFR 63.7760

~~(cc)~~ **(bb)** 40 CFR 63.7761
~~(dd)~~ **(cc)** 40 CFR 63.7765
~~(ee)~~ **(dd)** Table 1 to Subpart EEEEE of Part 63

BACT Air Quality Impact Analysis

See Appendix C of this Technical Support Document for an Air Quality Impact Analysis for this modification.

Endangered Species

The Clean Air Act (CAA) does not contain or express requirement for the applicant or the permitting agency to analyze or consider the impact of hazardous air pollutants on endangered species when applying for or making a decision on a PSD permit. The CAA only requires impacts to endangered species be considered when the US EPA modifies the HAPs list or promulgates a NESHAP. (42 USC 7412).

In addition, Indiana's state rules do not require the performance of studies or analyses to determine the effect of toxic emissions from a source on federal or state-listed endangered species in the PSD permitting process.

Endangered species are protected under state and federal laws, which prohibit the unlawful taking of an endangered species. IC 14-22-34 and 16 USC 701 et. seq. See Appendix D of this Technical Support Document for a detailed list of endangered and threatened species for Fulton County, Indiana.

The OAQ is not aware of any federally-listed endangered species within the vicinity of this source or within the city of Rochester, Indiana. Based on the location of the plant and the air quality analysis done, the impact of the modification to this industrial area would not affect habitats of endangered species; therefore; emissions from this source will not adversely affect any federally-listed endangered species or any state-listed endangered species.

Public Health and Safety

The Office of Air Quality (OAQ) issues technically sound permits that are protective of public health. Within the boundaries of the law, the OAQ has conducted appropriate analysis of the impacts of this proposed facility on human health. State Implementation Plan (SIP) requirements are examples of health-based standards, because the SIP requirements were proposed by the state and approved by the U.S. EPA for the purposes of maintaining the National Ambient Air Quality Standards (NAAQS). These standards are health-based standards and based on the assessment of public health risks associated with certain levels of pollution in the ambient environment. The Clean Air Act (CAA) requires each state to develop air quality plans and outlines how the standards will be met.

U.S. EPA has established ambient levels that are protective of human health. Anticipated emissions can be modeled and the resulting ambient levels compared to the federal standard. If levels are not expected to increase above U.S. EPA's ambient standard, it is appropriate to conclude that the proposed facility will not pose an increased threat to public health.

Noise, Odor and Zoning

The Office of Air Quality (OAQ) does not have jurisdiction over noise pollution, odor and zoning.

Environmental Justice (EJ)

Based on the 2000 US Census, there are 12.5% of Indiana residents who identified themselves as racial minority. An area is classified as High Racial Minority if it falls between 18.75% to 24.99%. Fulton County, IN, where Rochester Metal Products Corporation is located does not fall under this classification.

Based on the 1990 US Census, 28% of Indiana residents lived in households that received an income less than or equal to twice the poverty level. This is classified a Low Income Household. Fulton County, IN, where Rochester Metal Products Corporation is located does not fall under this classification.

If the source being reviewed is going to be located in an area considered to be either a High Racial Minority or Low Income Household, the OAQ attempts to publish the notice for the public review in a non-English newspaper, and holds a public meeting prior to the issuing a final action. Since Fulton County, where Rochester Metal Products Corporation is located is neither of these classifications, the OAQ will only publish the notice in a most circulated newspaper in the area.

For more information on Environmental Justice (EJ), please refer to the IDEM website under the "Your Community" and "Community Involvement" links.

Recommendation and Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. SSM 049-24381-00002 and Significant Permit Modification No. SPM 049-24477-00002.

(1) Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that the Significant Source Modification No. SSM 049-24381-00002 and Significant Permit Modification No. SPM 049-24477-00002 be approved.

(2) A copy of the preliminary findings is also available on the Internet at: www.in.gov/idem/permits/air/pending.html.

(3) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem/permits/guide/.

TSD Appendices

The following are the appendices of this TSD:

(1) Appendix A – Emissions Calculations

(2) Appendix B – PSD BACT Analyses

(3) Appendix C – Air Quality Impact Analysis

(4) Appendix D – Economic Analysis for CO BACT

(5) Appendix E – Indiana Fulton County Endangered, Threatened and Rare Species List

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No. SSM 049-24381-00002 and Significant Permit Modification No. SPM 049-24477-00002 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix A – Emission Calculations
Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name: Rochester Metal Products Corporation
Address City IN Zip: 616 Indiana Avenue, Rochester, IN 46975
County: Fulton
SIC Code: 3321
Source Modification: SSM 049-24381-00002
Permit Modification: SPM 049-24477-00002
Permit Reviewer: Kimberly Cottrell
Date: December 4, 2009

Summary of Potential to Emit

The table below summarizes the potential to emit calculations submitted by Rochester Metal Products Corporation. The subsequent pages of this document contain the calculations provided by Rochester Metal Products Corporation. IDEM has reviewed these calculations and verified their accuracy.

Summary of Emission Limits

									CO Emissions			PM Emissions			PM_{10} Emissions			
Stack ID	**Control Device**	**Emission Unit ID**	**Process**	**Maximum Throughput (tons/hr)**	**Maximum Throughput (tons/yr)**	**Permit Throughput Limit (tons/hr)**	**Permit Throughput Limit (tons/yr)**	**Air Flow Rate (dscfm)**	**BACT Limit (lb/ton)**	**CO Emissions (lb/hr)**	**CO Emissions (tons/yr)**	**PM BACT Limit (gr/dscf)**	**PM BACT Limit (lb/hr)**	**PM Emissions (tons/yr)**	**PM_{10} BACT Limit (lb/hr)**	**Adjusted PM_{10} Emissions (tons/yr)**	**PM_{10} Emissions (lb/hr) for Modeling***	**PM_{10} Emissions (ton/yr) for Modeling***
DC-9	Baghouse DC-9	EU-118	Charge Handling & Scrap Preheater	21	183,960	10	84,000	38,057	NA	NA	NA	0.003	0.98	4.29	1.0	2.00	1.0	3.09
		EU-114	Induction Furnace 4															
		EU-115	Induction Furnace 5															
Internal	Baghouse DC-10	EU-119	Disa Magnesium Treatment	20	175,200	20	100,000	5,000	NA	NA	NA	0.003	0.13	0.56	0.13	0.32	NA	NA
		EU-120	Hunter Magnesium Treatment	10.3	90,228	10.3	16,600	*5,000*	*NA*	*NA*	*NA*	*0.003*	*0.13*	*0.56*	*0.13*	*0.10*	*NA*	*NA*
DC-13	Baghouse DC-13	EU-131	Hunter Induction Furnace 1	13	113,880	6	45,000	26,755	NA	NA	NA	0.003	0.70	3.01	0.7	1.21	0.7	1.22
		EU-132	Hunter Induction Furnace 2															
		EU-133	Hunter Induction Furnace 3															
DC-3	Baghouses DC-3	EU-311	Hunter sand system	100	876,000	100	436,893	21,507	NA	NA	NA	NA	NA	NA	1.0	2.18	1.0	2.19
DC-4	Baghouses DC-4	EU-311	Hunter sand system	100	876,000	100	436,893	53,934	NA	NA	NA	NA	NA	NA	1.0	2.18	1.0	2.19
HP1	internal	EU-313	Hunter pouring & cooling	10.3	90,228	10.3	45,000	13,588	NA	NA	NA	NA	NA	NA	1.4	3.06	1.4	3.06
HP2	internal	EU-313	Hunter pouring & cooling	METAL		METAL	36,000 (H4)	13,588	NA	NA	NA	NA	NA	NA	1.4	3.06	1.4	3.06
HP3	internal	EU-313	Hunter pouring & cooling	100	876,000	100	436,893		NA	NA	NA	NA	NA	NA	1.4	3.06	1.4	3.06
HP4	internal	EU-313	Hunter pouring & cooling	SAND		SAND		13,588	NA	NA	NA	NA	NA	NA	1.4	3.06	1.4	3.06
Internal	Bin vent filters	EU-201	Core Sand Storage	NA	NA	NA	NA	24	NA	NA	NA	0.003	0.001	0.003	0.001	0.012	NA	NA
External	Bin vent filters	EU-202	Disa Sand & Bond Silos	NA	NA	NA	NA	1,605	NA	NA	NA	0.003	0.04	0.181	0.04	0.79	NA	NA
Internal	Bin vent filters	EU-DNS	Disa New Sand Day Bin	NA	NA	NA	NA	1,605	NA	NA	NA	0.003	0.04	0.181	0.04	0.79	NA	NA
DC-6/7	Baghouse DC-6	EU-321	Disa 1/Disa 2 Sand System	10	87,600	10	62,000	91,858	**	**	**	0.003	2.36	10.35	4.60	14.27	4.6	14.25
		EU-325	Disa 1 Casting Cooling Process															
	Baghouse DC-7	EU-324	Disa 1 Shakeout						**	**	**							
333A	*In-Line Filters*	*EU-323*	*Disa 1 Pouring & Cooling*	*10*	*87,600*	*10*	*62,000*	*18,672*	*6.0*	*60*	*263*	*0.005*	*0.80*	*3.50*	*2.50*	*7.75*	*2.5*	*7.79*
333B	*In-Line Filters*	*EU-333*	*Disa 2 Pouring & Cooling*	*10*	*87,600*	*10*	*62,000*	*21,655*	*6.0*	*60*	*263*	*0.005*	*0.93*	*4.06*	*2.50*	*7.75*	*2.5*	*7.79*
333C	This is the proposed new combined stack			20	175,200	20	84,000	45,679	6.0	120	526	0.005	1.96	8.57	5.0	10.5	5.0	15.57
DC-11	Baghouse DC-11	EU-331	Disa 2 Sand Muller	10	87,600	10	62,000	46,940	**	**	**	0.003	1.21	5.29	1.0	3.10	1.0	3.09
		EU-334	Disa 2 Shakeout															
Internal	Baghouse DC-12	EU-335	Disa 2 Casting Cooling Process	10	87,600	10	62,000	32,686	**	**	**	0.003	0.84	3.68	0.84	2.61	NA	NA
		EU-433	Disa 2 Grinding															
Internal	Baghouse DC-8	EU-325	Disa 1 Casting Cooling Process	10	87,600	10	62,000	16,266	NA	NA	NA	0.003	0.42	1.83	0.42	1.3	NA	NA
		EU-411	Disa 1 Shot Blast															
		EU-431	Disa 2 Shot Blast															
		EU-413	Disa 1 Grinding															
TOTAL											**526**			**37.51**	**19.90**	**52.68**	**19.9**	**53.85**

PM_{10} Emissions (internal; not modeled):	1.47	5.82
Total PM_{10} Emissions:	21.37	58.50

1. Internally vented processes were not included in the air quality modeling for PM_{10}.
2. The modeled short term PM_{10} emission rate is based on the lb/ton emission limit and the ton/hr metal throughput limit for each emission unit.
3. The CO emissions from all Disa 1 and Disa processes are limited under Disa 1 and Disa 2 Pouring and Cooling.
4. Metal throughput for the entire Hunter system is effectively limited under the total metal pouring limit of 45,000 tons/12 months and the Hunter 4 metal limit of 36,000 tons/12 months.
5. Sand throughput for the entire Hunter system is effectively limited by the same ratio of limitation as exists under the metal throughput limitation for the Hunter system.
4. Metal throughput for the Disa 1 and Disa 2 systems is effectively limited under the total metal pouring limit of 84,000 tons/12 months and the combined metal limit of 62,000 tons/12 months.
5. Sand throughput for the Disa 1 and Disa 2 systems is effectively limited by the same ratio of limitation as exists under the metal throughput limitation for the Hunter system.
6. Disa 1 and Disa 2 Pouring and cooling are currently vented to two separate stacks. As part of this modification, a new stack will be constructed and the emissions from both Disa 1 and Disa 2 will exhaust to a combined stack.

Air Quality Analysis

Modeling Stack ID	Source Description	Control Device Stack ID	Emission Unit ID	Stack Temp (F)	Stack Temp (K)	Stack Diameter (m)	Air Flow Velocity (m/s)	Air Flow Rate (m^3/s)	Air Flow Rate (ACFM)	Air Flow Rate (dscf)	Modeled PM_{10} Emission Rates Short Term (g/s)	Annual (g/s)	Short Term (lb/hr)	Annual (tpy)
ST1	Disa Sand System and Shakeout	DC-6/7	EU 321,325,324	99	310.4	1.77	18.6	45.7	96,885	91,858	0.58	0.41	4.6	14.25
ST2	Induction furnaces and Pre-	DC-9	EU 118,114,115	150	338.7	1.22	17.7	20.7	43,801	38,057	0.126	0.089	1.0	3.09
ST3	Disa 2 sand and shakeout	DC-11	EU 331,334	110	316.5	1.22	20.4	23.8	50,483	46,940	0.126	0.089	1.0	3.09
ST4	Hunter Melt furnaces	DC-13	EU 131,132,133	175	352.6	1.01	18.9	15.1	32,055	26,755	0.0882	0.035	0.7	1.22
ST5	*Disa 1 Pouring and Cooling*	*333-A*	*EU 323*	*120*	*322.0*	*0.78*	*20.2*	*9.6*	*20,433*	*18,672*	*0.315*	*0.224*	*2.5*	*7.79*
ST6	*Disa 2 Pouring and Cooling*	*333-B*	*EU 333*	*120*	*322.0*	*0.84*	*20.2*	*11.2*	*23,698*	*21,655*	*0.315*	*0.224*	*2.5*	*7.79*
ST5&6 *	Disa 1&2 Pouring and Cooling	333-C	EU 333	120	322.0	1.22	20.2	23.6	49,988	45,679	0.63	0.448	5.0	15.57
												Disa 1 and Disa 2 Emission Units SUBTOTAL	**12.3**	**37.23**
DC3	Sand System	DC-3		99	310.4	0.97	14.5	10.7	22,683	21,507	0.126	0.063	1.0	2.19
DC4	Shakeout and Sand System	DC-4		110	316.5	1.52	15.1	27.4	58,004	53,934	0.126	0.063	1.0	2.19
HP1	Hunter Pouring and Cooling	NA		120	322.0	0.91	10.8	7.0	14,870	13,588	0.1764	0.088	1.4	3.06
HP2	Hunter Pouring and Cooling	NA		120	322.0	0.91	10.8	7.0	14,870	13,588	0.1764	0.088	1.4	3.06
HP3	Hunter Pouring and Cooling	NA		120	322.0	0.91	10.8	7.0	14,870	13,588	0.1764	0.088	1.4	3.06
HP4	Hunter Pouring and Cooling	NA		120	322.0	0.91	10.8	7.0	14,870	13,588	0.1764	0.088	1.4	3.06
												Hunter Process Units SUBTOTAL	**7.6**	**16.62**
												GRAND TOTAL	**19.9**	**53.85**

* Currently, the emissions from Disa 1 and Disa 2 Pouring and Cooling are vented to two different stacks; however, the modification will redirect emissions from the two processes through only one stack.

Methodology:

K = 5/9 (F + 459.67)
Air Flow Rate (m^3/s) = Air Flow Velocity (m/s) x pi x (1/2 stack diameter)^2
Air Flow Rate (ACFM) = Air Flow Rate (m^3/s) x 60 s/min x 35.3 ft^3/m^3
Air Flow Rate (dscf) = Air Flow Rate (ACFM) x (70 + 460) / (F + 460)
Short Term Emission Rate (lb/hr) = Short Term Emission Rate (g/s) x 3600 s/hr / 453.6 g/lb
Annual Emission Rate (lb/hr) = Annual Emission Rate (g/s) x 3600 s/hr / 453.6 g/lb x 8760 hr/yr / 2000 lb/ton

Gray and Ductile Iron Foundry Calculations

	Total Throughput tons/hr
2 Preheaters & Charge Handling System (EU-118)	34.00

SCC 03-04-003-15

Capacities: 13 and 21 tons of metal per hour

	PM	PM10
Emission Factors lbs/ton produced	0.600	0.360
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	20.4	12.24
Potential Emissions tons/yr	**89.4**	**53.6**
Potential Emissions after Controls lbs/hr	0.655	0.476
Potential Emissions after Controls tons/yr	**2.87**	**2.09**

	Stack DC-9
	DC-9
PM Control	96.79%
PM-10 Control	96.11%

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-15

	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Limited Throughput MMCF/yr
2 Preheaters Rated at 7.0 and 14.0 mmBtu/hr	21.000	183.96	NA
Other NG usage	32.130	281.46	NA
	53.130	465.42	150.00

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.600	100	5.50	84.0
				**see below		
Potential Emission in tons/yr	**0.44**	**1.77**	**0.14**	**23.27**	**1.28**	**19.55**
Limited Emission in tons/yr	**0.14**	**0.57**	**0.05**	**7.50**	**0.41**	**6.30**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
Control efficiencies from Title V permit T049-5999-00002

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	Total Throughput tons/hr
2 Electric Induction Furnaces (EU-114 & EU-115)	
SCC 03-04-003-03	21.00

	Stack DC-9
	DC-9
PM Control	90.90%
PM-10	90.90%

Furnace Capacities: 10.5 tons/hour each

	PM	PM10
Emission Factors lbs/ton produced	0.900	0.860
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	18.9	18.06
Potential Emissions tons/yr	**82.8**	**79.1**
Potential Emissions after Controls lbs/hr	1.72	1.64
Potential Emissions after Controls tons/yr	**7.53**	**7.20**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-03
Control efficiencies from Title V permit T049-5999-00002

Gray and Ductile Iron Foundry Calculations

Hunter	Total Throughput tons/hr			Stack DC-13 DC-13
3 Electric Induction Furnaces (EU-131, 132 & 133)	13.00		PM Control	89.04%
SCC 03-04-003-03			PM-10	91.20%

Furnace Capacities: 3.0, 3.0 & 7.0 tons/hour

	PM	PM10
Emission Factors lbs/ton produced	0.900	0.860
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	11.7	11.18
Potential Emissions tons/yr	**51.2**	**49.0**
Potential Emissions after Controls lbs/hr	1.28	0.984
Potential Emissions after Controls tons/yr	**5.62**	**4.31**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-03
Control efficiencies from Title V permit T049-5999-00002

Disa 1/Disa 2 Sand System (EU-321)	Throughput tons/hr			Stack DC-6/7 DC-6
SCC 03-04-003-50	60.00		PM Control	97.56%
			PM-10	97.56%

	PM	PM10
Emission Factors lbs/ton sand handled	3.600	0.540
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	216.0	32.40
Potential Emissions tons/yr	**946.1**	**141.9**
Potential Emissions after Controls lbs/hr	5.27	0.791
Potential Emissions after Controls tons/yr	**23.1**	**3.46**

Emission Factors for PM from AP-42, Section 12.10, Table 12.10-7 & PM-10 from US EPA's WebFIRE SCC 03-04-003-50
Control efficiencies from Title V permit T049-5999-00002

Disa 1 Pouring and Cooling Process (EU-323)	Throughput tons/hr	Limited Throughput tons/yr		Stack D-333A In-line filters D-333
SCC 03-04-003-20			PM Control	80.00%
	10.00	62000	PM-10	80.00%

	PM	PM10	VOC	SO2	NOx	CO
Emission Factors lbs/ton	2.8	2.06	0.14	0.02	0.01	6.00
Percentage of Emissions	100.00%	100.00%	100.00%	100.00%	100.00%	100%
Potential Emissions lbs/hr	28.00	20.60	1.40	0.200	0.100	60.000
Potential Emissions tons/yr	**122.64**	**90.23**	**6.13**	**0.876**	**0.438**	**262.800**
Potential Emissions after Controls lbs/hr	5.600	4.120	see EU-324	0.200	0.100	42.466
Potential Emissions after Controls tons/yr	**24.53**	**18.05**	**see EU-324**	**0.876**	**0.438**	**186.000**

Emission factor for PM from Part 70 permit T049-5999-00002.
Emission factors for PM10, VOC, SO2 and NOx from US EPA's WebFIRE SCC 03-04-003-20
CO emission factor based on best available information for CO emissions from pouring, cooling, and shakeout operations. CO emission factor includes emissions from the Disa 1 Pouring and Cooling Process (EU-323), the Disa 1 Casting Shakeout Process (EU-324), and the Disa 1 Casting Cooling Process (EU-325) combined.
Control efficiencies from Title V permit T049-5999-00002

Gray and Ductile Iron Foundry Calculations

Disa 1 Casting Shakeout Process (EU-324)	Throughput	Limited Throughput		Stack DC-6/7 DC-7
SCC 03-04-003-31	tons/hr	tons/yr	PM Control	97.56%
	10.00	62000	PM-10	97.56%

	PM	PM10	VOC*
Emission Factors lbs/ton produced	3.200	2.240	1.200
Percentage of Emissions	100%	100%	100%
Potential Emissions lbs/hr	32.0	22.40	12.0
Potential Emissions tons/yr	**140.2**	**98.1**	**52.6**
Potential Emissions after Controls lbs/hr	0.781	0.547	5.7
Potential Emissions after Controls tons/yr	**3.42**	**2.39**	**24.8**

Emission Factors for PM, PM-10 and VOC from US EPA's WebFIRE SCC 03-04-003-31
*Controlled VOC emissions represent limited VOC emissions from the Disa 1 Pouring and Cooling Process (EU-323) and the Disa 1 Casting Shakeout Process (EU-324) combined to render 326 IAC 8-1-6 and 326 IAC 2-2
Control efficiencies from Title V permit T049-5999-00002

Disa 1 Casting Cooling Process (EU-325)	Throughput			Stack DC-6/7 DC-6 & DC-8	
SCC 03-04-003-25	tons/hr		PM Control	97.56%	Used Worst Case Control
	10.00		PM-10	97.56%	Efficiency for DC-6

	PM	PM10
Emission Factors lbs/ton produced	1.400	1.400
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	14.0	14.00
Potential Emissions tons/yr	**61.3**	**61.3**
Potential Emissions after Controls lbs/hr	0.342	0.342
Potential Emissions after Controls tons/yr	**1.50**	**1.50**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-25
Control efficiencies from Title V permit T049-5999-00002

Disa 1 Shot Blast (EU-411) (1 unit)	Throughput			Exhausted internally DC-8
SCC 03-04-003-40	tons/hr		PM Control	99.9%
	10.00		PM-10	99.9%

	PM	PM10
Emission Factors lbs/ton produced	17.0	1.70
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	170.0	17.00
Potential Emissions tons/yr	**744.6**	**74.5**
Potential Emissions after Controls lbs/hr	0.170	0.017
Potential Emissions after Controls tons/yr	**0.745**	**0.074**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-40
Control efficiencies from Title V permit T049-5999-00002

Disa 1 Grinding System (EU-413)	Throughput			Exhausted internally DC-8
SCC 03-04-003-40	tons/hr		PM Control	99.9%
	10.00		PM-10	99.9%

	PM	PM10
Emission Factors lbs/ton produced	0.010	0.0045
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	0.1	0.05
Potential Emissions tons/yr	**0.4**	**0.2**
Potential Emissions after Controls lbs/hr	1.0E-04	4.5E-05
Potential Emissions after Controls tons/yr	**4.4E-04**	**2.0E-04**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-40
Control efficiencies from Title V permit T049-5999-00002

Gray and Ductile Iron Foundry Calculations

Disa 2 Sand Muller (EU-331)	Throughput			Stack DC-11 DC-11
SCC 03-04-003-50	tons/hr		PM Control	99.68%
	60.00		PM-10	98.41%

	PM	PM10
Emission Factors lbs/ton sand handled	3.600	0.540
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	216.0	32.40
Potential Emissions tons/yr	**946.1**	**141.9**
Potential Emissions after Controls lbs/hr	0.691	0.515
Potential Emissions after Controls tons/yr	**3.03**	**2.26**

Emission Factors for PM from AP-42, Section 12.10, Table 12.10-7 & PM-10 from US EPA's WebFIRE SCC 03-04-003-50
Control efficiencies from Title V permit T049-5999-00002

Disa 2 Pouring and Cooling Process (EU-333)	Throughput	Limited Throughput		Stack D-333B In-line filters D-333
SCC 03-04-003-20	tons/hr	tons/yr	PM Control	80.00%
	10.0	62000	PM-10	80.00%

	PM	PM10	VOC	SO2	NOx	CO
Emission Factors lbs/ton produced	4.2	2.06	0.14	0.02	0.01	6.00
Percentage of Emissions	100%	100%	100%	100%	100%	100%
Potential Emissions lbs/hr	42.00	20.60	1.40	0.20	0.10	60.00
Potential Emissions tons/yr	**184.0**	**90.2**	**6.13**	**0.876**	**0.438**	**262.800**
Potential Emissions after Controls lbs/hr	8.40	4.12	see EU-334	0.200	0.100	42.466
Potential Emissions after Controls tons/yr	**36.8**	**18.0**	**see EU-334**	**0.876**	**0.438**	**186.000**

Emission factors for PM, PM10, VOC, SO2 and NOx from US EPA's WebFIRE SCC 03-04-003-20
CO emission factor based on best available information for CO emissions from pouring, cooling, and shakeout operations. CO emission factor includes emissions from the Disa 2 Pouring and Cooling Process (EU-333), the Disa 2 Shakeout System (EU-334), and the Disa 2 Casting Cooling Process (EU-335) combined.
Control efficiencies from Title V permit T049-5999-00002

Disa 2 Shakeout System (EU-334)	Throughput	Limited Throughput		Stack DC-11 DC-11
SCC 03-04-003-31	tons/hr	tons/yr	PM Control	99.68%
	10.00	62000	PM-10	98.41%

	PM	PM10	VOC*
Emission Factors lbs/ton produced	3.20	2.24	1.200
Percentage of Emissions	100%	100%	100%
Potential Emissions lbs/hr	32.0	22.40	12.0
Potential Emissions tons/yr	**140.2**	**98.1**	**52.6**
Potential Emissions after Controls lbs/hr	0.102	0.356	5.7
Potential Emissions after Controls tons/yr	**0.449**	**1.560**	**24.8**

Emission Factors for PM, PM-10 and VOC from US EPA's WebFIRE SCC 03-04-003-31
applicable.
Control efficiencies from Title V permit T049-5999-00002

Disa 2 Casting Cooling Process (EU-335)	Throughput			Exhausts internally DC-12
SCC 03-04-003-25	tons/hr		PM Control	99.9%
	10.00		PM-10	99.9%

	PM	PM10
Emission Factors lbs/ton produced	1.400	1.400
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	14.0	14.00
Potential Emissions tons/yr	**61.3**	**61.3**
Potential Emissions after Controls lbs/hr	0.014	0.014
Potential Emissions after Controls tons/yr	**0.061**	**0.061**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-25
Control efficiencies from Title V permit T049-5999-00002

Gray and Ductile Iron Foundry Calculations

Disa 2 Shot Blast Unit (EU-431) (1 unit)	Throughput tons/hr		PM Control	Exhausts internally DC-8
SCC 03-04-003-40	10.00		PM-10	99.9%

	PM	PM10
Emission Factors lbs/ton produced	17.000	1.700
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	170.0	17.00
Potential Emissions tons/yr	**744.6**	**74.5**
Potential Emissions after Controls lbs/hr	0.170	0.017
Potential Emissions after Controls tons/yr	**0.745**	**0.074**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-40
Control efficiencies from Title V permit T049-5999-00002

Disa 2 Grinding Process (EU-433)	Throughput tons/hr		PM Control	Exhausts internally DC-12
SCC 03-04-003-40	10.00		PM-10	99.9%

	PM	PM10
Emission Factors lbs/ton produced	0.010	0.0045
Percentage of Emissions	100%	100%
Potential Emissions lbs/hr	0.1	0.05
Potential Emissions tons/yr	**0.4**	**0.2**
Potential Emissions after Controls lbs/hr	1.0E-04	4.5E-05
Potential Emissions after Controls tons/yr	**4.4E-04**	**2.0E-04**

Emission Factors for PM & PM-10 from US EPA's WebFIRE SCC 03-04-003-40
Control efficiencies from Title V permit T049-5999-00002

Magnesium Treatment System (EU-119)	Throughput tons/hr	Limited Throughput tons/yr	PM Control	Exhausts internally DC-10
SCC 03-04-003-21	20.00	100000	PM-10	99.9%

	PM	PM10	VOC
Emission Factors lbs/ton produced	1.800	0.400	0.005
Percentage of Emissions	100%	100%	100%
Potential Emissions lbs/hr	36.0	8.00	0.100
Potential Emissions tons/yr	**90.0**	**20.0**	**0.4380**
Potential Emissions after Controls lbs/hr	0.021	0.005	0.057
Potential Emissions after Controls tons/yr	**0.090**	**0.020**	**0.2500**

Emission Factors for PM and PM10 from AP-42 Section 12, Table 12.10-7
VOC emission factor for inoculation (SCC 3-04-003-10) was used and obtained from US EPA's WebFIRE.
Control efficiencies from Title V permit T049-5999-00002

Gray and Ductile Iron Foundry Calculations

6 Phenolic Urethane Cold Box Core Machines

Core Machine (EU-213)	Throughput tons/hr	VOC Control	
(0.25 tons of cores per hour)	0.25		0.0%

	VOC
Emission Factors lbs/ton produced	3.00
Percentage of Emissions	100.00%
Potential Emissions lbs/hr	0.750
Potential Emissions tons/yr	**3.285**

The emission factor of 0.65 lbs of resin VOC/ton of cores times a conservative factor of 50% = 1.0 lb of resin VOC/ton of cores + 2.0 lbs/ton of DMEA = 3.00 lbs of VOC/ton of cores

Core Machines (EU-231 a and b)	Throughput tons/hr	VOC Control	
(0.25 and 0.35 tons of cores per hour)	0.60		0.0%

	VOC
Emission Factors lbs/ton produced	3.00
Percentage of Emissions	100.00%
Potential Emissions lbs/hr	1.800
Potential Emissions tons/yr	**7.88**

The emission factor of 0.65 lbs of resin VOC/ton of cores times a conservative factor of 50% = 1.0 lb of resin VOC/ton of cores + 2.0 lbs/ton of DMEA = 3.00 lbs of VOC/ton of cores

Disa Core Sand Storage Silo (EU-201)	Throughput tons/hr			**Bin Vent Filter**
			PM Control	99.7%
	0.85		PM-10	99.7%

	PM	PM10
Emission Factors lbs/ton produced	0.27	0.27
Percentage of Emissions	100.00%	100.00%
Potential Emissions lbs/hr	0.2	0.23
Potential Emissions tons/yr	**1.0**	**1.0**
Potential Emissions After Controls lbs/hr	6.9E-04	6.9E-04
Potential Emissions after Controls tons/yr	**0.003**	**0.003**

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10
Control efficiencies from Title V permit T049-5999-00002

1 Disa Sand Silo and 1 Bond Storage Silo (EU-202)	Throughput tons/hr	Limited Sand/Bond Throughput tons/yr		**Bin Vent Filters**
			PM Control	99.9%
	150.00	14280	PM-10	99.9%

	PM	PM10
Emission Factors lbs/ton produced	0.27	0.27
Percentage of Emissions	100.00%	100.00%
Potential Emissions lbs/hr	40.5	40.50
Potential Emissions tons/yr	**1.9**	**1.9**
Potential Emissions After Controls lbs/hr	0.00048	0.00048
Potential Emissions after Controls tons/yr	**0.002**	**0.002**

Disa 1 and Disa 2 Metal throughput limit	84000	tons/year
Tonsof new bond/ton metal	0.08	
Tons of new sand per ton metal	0.09	

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10
Control efficiencies from Title V permit T049-5999-00002

Disa New Sand Day Bin	Throughput tons/hr		**Bin Vent**
		PM Control	99.0%
	66.00	PM-10	99.0%

Based on grain loading with an assumed 99% control	PM	PM10
PM = PM10 Potential tons /yr	**19.40**	**19.40**
Potential Emissions after Controls lbs/hr	0.044	0.044
Potential Emissions after Controls tons/yr	**0.194**	**0.194**

PM Emission Factor from AP-42, Section 11.12, Table 11.12-2 and PM = PM-10
Control efficiencies from Title V permit T049-5999-00002

Gray and Ductile Iron Foundry Calculations

Process Description	Before/After Control	PM (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)	NOx (tpy)	CO (tpy)
2 Preheaters & Charge Handling System (EU-118)	Before	89.4	53.6	0	0	0	0
Total for Baghouse DC-9 (EUs-114, 115 & 118)	After	2.87	2.09	0	0	0	0
2 Preheaters & Charge Handling System (EU-118)	Before	0.44	1.77	1.28	0.14	23.27	19.55
Combustion Only	After	0.14	0.57	0.41	0.05	7.50	6.30
2 Electric Induction Furnaces (EU-114 & EU-115)	Before	82.8	79.1	0	0	0	0
	After	7.53	7.20	0	0	0	0
	Before	172.6	134.5	0	0	0	0
Total for Baghouse DC-9 (EUs-114, 115 & 118)	After	10.5	9.85	0	0	0	0
3 Electric Induction Furnaces (EU-131, 132 & 133)	Before	51.2	49.0	0	0	0	0
	After	5.62	4.31	0	0	0	0
Disa 1/Disa 2 Sand System (EU-321)	Before	946.1	141.9	0	0	0	0
	After	23.1	3.46	0	0	0	0
Disa 1 Pouring and Cooling Process (EU-323)	Before	122.6	90.2	6.13	0.88	0.44	262.8
	After	24.5	18.0	see EU-324	0.88	0.44	186.0
Disa 1 Casting Shakeout Process (EU-324)	Before	140.2	98.1	52.6	0	0	0
	After	3.42	2.39	24.8	0	0	0
Disa 1 Casting Cooling Process (EU-325)	Before	61.3	61.3	0	0	0	0
	After	1.50	1.50	0	0	0	0
Disa 1 Shot Blast (EU-411) (1 unit)	Before	744.6	74.5	0	0	0	0
	After	0.74	0.07	0	0	0	0
Disa 1 Grinding System (EU-413)	Before	0.4	0.2	0	0	0	0
	After	4.4E-04	2.0E-04	0	0	0	0
Disa 2 Sand Muller (EU-331)	Before	946.1	141.9	0	0	0	0
	After	3.03	2.26	0	0	0	0
Disa 2 Pouring and Cooling Process (EU-333)	Before	184.0	90.2	6.13	0.88	0.44	262.8
	After	36.8	18.0	see EU-334	0.88	0.44	186.0
Disa 2 Shakeout System (EU-334)	Before	140.2	98.1	52.6	0	0	0
	After	0.45	1.56	24.8	0	0	0
Disa 2 Casting Cooling Process (EU-335)	Before	61.3	61.3	0	0	0	0
	After	0.06	0.06	0	0	0	0
Disa 2 Shot Blast Unit (EU-431) (1 unit)	Before	744.6	74.5	0	0	0	0
	After	0.74	0.07	0	0	0	0
Disa 2 Grinding Process (EU-433)	Before	0.4	0.2	0	0	0	0
	After	4.4E-04	2.0E-04	0	0	0	0
Magnesium Treatment System (EU-119)	Before	90.0	20.0	0.44	0	0	0
	After	0.09	0.02	0.25	0	0	0
Core Machine (EU-213)	Before	0	0	3.29	0	0	0
	After	0	0	3.29	0	0	0
Core Machines (EU-231 a and b)	Before	0	0	7.88	0	0	0
	After	0	0	7.88	0	0	0
Disa Core Sand Storage Silo (EU-201)	Before	1.0	1.0	0	0	0	0
	After	0	0	0	0	0	0
1 Disa Sand Silo and 1 Bond Storage Silo (EU-202)	Before	1.9	1.9	0	0	0	0
	After	0.00	0.00	0	0	0	0
Disa New Sand Day Bin	Before	19.4	19.4	0	0	0	0
	After	0.19	0.19	0	0	0	0
TOTAL	**Before Control**	**4600.5**	**1292.7**	**130.3**	**1.9**	**24.1**	**545.1**
	After Control	**121.3**	**71.7**	**61.4**	**1.8**	**8.4**	**378.3**

HAP Emission Calculations

Pouring-Cooling-Shakeout Binder System HAP Calculations

Annual Usage of Index Material (Resin (lbs/yr)	Binder System
148920	Phenolic Urethane

Pollutant	HAP Emission Factors (lb/lb resin)	Pollutant Emissions (lbs/yr)	Pollutant Emissions (tons/yr)
Acrolein	0.000031	4.617	0.002
Benzene	0.005351	796.871	0.398
Formaldehyde	0.000022	3.276	0.002
Hydrogen Cyanide	0.001053	156.813	0.078
M-Xylene	0.000439	65.376	0.033
Napthalene	0.000022	3.276	0.002
O-Xylene	0.000132	19.657	0.010
Phenol	0.003904	581.384	0.291
Toluene	0.000833	124.050	0.062
Total Aromatic Amines	0.000351	52.271	0.026
Total C2 to C5 Aldehydes	0.000219	32.613	0.016
Total HAPs	0.012355	1839.907	**0.92**
Total State Potential Emissions			

20 lbs of phenolic urethane resin per ton cores or 20 lb/ton * 0.85 tons/hr * 8,760 hr/y 148920.00 lbs/yr

			Total	
EU-213 & EU-2	0.25	tons of cores per hour each	0.50	tons of cores per hour
EU-231b	0.35	tons of cores per hour	0.35	tons of cores per hour
		0	**0.85**	tons of cores per hour
		0		

METHODOLOGY

Emission factors from the 1994 Modern Casting article titled "Calculating Emission Factors for Pouring, Cooling and Shakeout" by Gary Moshe

HAPS emission rate (tons/yr) = Annual Usage (lbs/yr) * Emission Factor (lbs Chemical/lbs Index) * 1 ton/2000 lb

2 Electric Induction Furnaces	Total Throughput	Limited Throughput		**DC-9**
EU-114 & 115	tons/hr	tons/yr	PM Control	90.90%
Furnace Capacities: 10.5 tons/hour each	21.00	84000	PM-10	90.90%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	**Total**
Emission Factors lbs/ton produced	0.00034	0.00003	0.00060	0.00012	0.00005	0.00001	0.00167	0.00100	0.02790	
Potential Emissions (tons/yr)	0.03146	0.00248	0.05546	0.01076	0.00497	0.00083	0.15315	0.04200	2.56624	**2.87**
Potential Emissions after Controls (tons/yr	0.00286	0.00023	0.00505	0.00098	0.00045	0.00008	0.01394	0.00382	0.23353	**0.26**
Controlled and Limited (tons/yr)	0.00131	0.00010	0.00230	0.00045	0.00021	0.00003	0.00636	0.00382	0.10663	**0.12**

3 Electric Induction Furnaces	Total Throughput	Limited Throughput		**DC-13**
EU-131, 132, & 133	tons/hr	tons/yr	PM Control	89.04%
Furnace Capacities: 3, 3 & 7 tons/hou	13.00	45000	PM-10	91.20%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	**Total**
Emission Factors lbs/ton produced	0.00034	0.00003	0.00060	0.00012	0.00005	0.00001	0.00167	0.00100	0.02790	
Potential Emissions (tons/yr)	0.01947	0.00154	0.03433	0.00666	0.00307	0.00051	0.09481	0.02250	1.58863	**1.77**
Potential Emissions after Controls (tons/yr	0.00213	0.00017	0.00376	0.00073	0.00034	0.00006	0.01039	0.00247	0.17411	**0.19**
Controlled and Limited (tons/yr)	0.00084	0.00007	0.00149	0.00029	0.00013	0.00002	0.00411	0.00247	0.06880	**0.08**

HAP Emission Calculations

Disa 1 Pouring and Casting Process	Total Throughput	Limited Throughput		In-line filters D-333
EU-323	tons/hr	tons/yr	PM Control	80.00%
	10.00	62000	PM-10	80.00%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00106	0.00008	0.00188	0.00036	0.00017	0.00003	0.00518	0.00080	0.08680	
Potential Emissions (tons/yr)	0.04660	0.00368	0.08217	0.01594	0.00736	0.00123	0.22688	0.02480	3.80184	**4.21**
Potential Emissions after Controls (tons/yr	0.00932	0.00074	0.01643	0.00319	0.00147	0.00025	0.04538	0.00496	0.76037	**0.84**
Controlled and Limited (tons/yr)	0.00660	0.00052	0.01163	0.00226	0.00104	0.00017	0.03212	0.00496	0.53816	**0.60**

Disa 1 Casting Shakeout Process	Total Throughput	Limited Throughput		DC-7
EU-324	tons/hr	tons/yr	PM Control	97.56%
	10.00	62000	PM-10	97.56%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00122	0.00010	0.00214	0.00042	0.00019	0.00003	0.00592	0	0.09920	
Potential Emissions (tons/yr)	0.05326	0.00420	0.09391	0.01822	0.00841	0.00140	0.25930	0	4.34496	**4.78**
Potential Emissions after Controls (tons/yr	0.00130	0.00010	0.00229	0.00044	0.00021	0.00003	0.00633	0	0.10602	**0.12**
Controlled and Limited (tons/yr)	0.00092	0.00007	0.00162	0.00031	0.00015	0.00002	0.00448	0	0.07503	**0.08**

Disa 2 Pouring and Casting Process	Total Throughput	Limited Throughput		In-line filters D-333
EU-333	tons/hr	tons/yr	PM Control	80.00%
	10.00	62000	PM-10	80.00%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00160	0.00013	0.00281	0.00055	0.00025	0.00004	0.00777	0.00080	0.13020	
Potential Emissions (tons/yr)	0.06990	0.00552	0.12325	0.02391	0.01104	0.00184	0.34033	0.02480	5.70276	**6.30**
Potential Emissions after Controls (tons/yr	0.01398	0.00110	0.02465	0.00478	0.00221	0.00037	0.06807	0.00496	1.14055	**1.26**
Controlled and Limited (tons/yr)	0.00990	0.00078	0.01745	0.00339	0.00156	0.00026	0.04817	0.00496	0.80724	**0.89**

Disa 2 Shakeout System	Total Throughput	Limited Throughput		DC-11
EU-334	tons/hr	tons/yr	PM Control	99.68%
	10.00	62000	PM-10	98.41%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00122	0.00010	0.00214	0.00042	0.00019	0.00003	0.00592	0	0.09920	
Potential Emissions (tons/yr)	0.05326	0.00420	0.09391	0.01822	0.00841	0.00140	0.25930	0	4.34496	**4.78**
Potential Emissions after Controls (tons/yr	0.00017	0.00001	0.00030	0.00006	0.00003	0.00000	0.00083	0	0.01390	**0.02**
Controlled and Limited (tons/yr)	0.00012	0.00001	0.00021	0.00004	0.00002	0.00000	0.00059	0	0.00984	**0.01**

Disa 1 Shotblast Unit	Total Throughput	Limited Throughput		DC-8
EU-411	tons/hr	tons/yr	PM Control	99.90%
	10.00	62000	PM-10	99.90%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00646	0.00051	0.01139	0.00221	0.00102	0.00017	0.03145	0	0.52700	
Potential Emissions (tons/yr)	0.28295	0.02234	0.49888	0.09680	0.04468	0.00745	1.37751	0	23.08260	**25.41**
Potential Emissions after Controls (tons/yr	0.00028	0.00002	0.00050	0.00010	0.00004	0.00001	0.00138	0	0.02308	**0.03**
Controlled and Limited (tons/yr)	0.00020	0.00002	0.00035	0.00007	0.00003	0.00001	0.00097	0	0.01634	**0.02**

HAP Emission Calculations

Disa 1 Grinding Process	Total Throughput	Limited Throughput		DC-8
EU-413	tons/hr	tons/yr	PM Control	99.90%
	10.00	62000	PM-10	99.90%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00000	0.00000	0.00001	0.00000	0.00000	0.00000	0.00002	0	0.00031	
Potential Emissions (tons/yr)	0.00017	0.00001	0.00029	0.00006	0.00003	0.00000	0.00081	0	0.01358	**0.01**
Potential Emissions after Controls (tons/yr	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0	0.00001	**0.00**
Controlled and Limited (tons/yr)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0	0.00001	**0.00**

Disa 2 Shotblast Unit	Total Throughput	Limited Throughput		DC-8
EU-431	tons/hr	tons/yr	PM Control	99.90%
	10.00	62000.0	PM-10	99.90%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00646	0.00051	0.01139	0.00221	0.00102	0.00017	0.03145	0	0.52700	
Potential Emissions (tons/yr)	0.28295	0.02234	0.49888	0.09680	0.04468	0.00745	1.37751	0	23.08260	**25.41**
Potential Emissions after Controls (tons/yr	0.00028	0.00002	0.00050	0.00010	0.00004	0.00001	0.00138	0	0.02308	**0.03**
Controlled and Limited (tons/yr)	0.00020	0.00002	0.00035	0.00007	0.00003	0.00001	0.00097	0	0.01634	**0.02**

Disa 2 Grinding Process	Total Throughput	Limited Throughput		DC-12
EU-433	tons/hr	tons/yr	PM Control	99.90%
	10.00	62000.0	PM-10	99.90%

	Chromium	Cobalt	Nickel	Arsenic	Cadmium	Selenium	Antimony	Lead	Manganese	Total
Emission Factors lbs/ton produced	0.00000	0.00000	0.00001	0.00000	0.00000	0.00000	0.00002	0	0.00031	
Potential Emissions (tons/yr)	0.00017	0.00001	0.00029	0.00006	0.00003	0.00000	0.00081	0	0.01358	**0.01**
Potential Emissions after Controls (tons/yr	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0	0.00001	**0.00**
Controlled and Limited (tons/yr)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0	0.00001	**0.00**

Lead EF for Melting from US EPA's WebFIRE, SCC 03-04-003-03
All other HAP emission factors are based on the US EPA WebFIRE emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1.
Control efficiencies from Title V permit T049-5999-00002

USEPA Speciate v 3.1 Data	
Metal	**Gen. Foundry**
Manganese	3.100%
Chromium	0.038%
Cobalt	0.003%
Cadmium	0.006%
Nickel	0.067%
Arsenic	0.013%
Antimony	0.185%
Selenium	0.001%
Lead	0.385%

HAP Emission Calculations

Summary of Metal HAP Emissions

Process Description	Before/After Control Emissions	Chromium (tons/yr)	Cobalt (tons/yr)	Nickel (tons/yr)	Arsenic (tons/yr)	Cadmium (tons/yr)	Selenium (tons/yr)	Antimony (tons/yr)	Lead (tons/yr)	Manganese (tons/yr)	Subtotal (tons/yr)
2 Electric Induction Furnaces	Before	0.03146	0.00248	0.05546	0.01076	0.00497	0.00083	0.15315	0.04200	2.56624	2.8673
EU-114 & 115	After	0.00286	0.00023	0.00505	0.00098	0.00045	0.00008	0.01394	0.00382	0.23353	0.2609
	After/Limit	0.00131	0.00010	0.00230	0.00045	0.00021	0.00003	0.00636	0.00382	0.10663	0.1212
3 Electric Induction Furnaces	Before	0.01947	0.00154	0.03433	0.00666	0.00307	0.00051	0.09481	0.02250	1.58863	1.7715
EU-131, 132, & 133	After	0.00213	0.00017	0.00376	0.00073	0.00034	0.00006	0.01039	0.00247	0.17411	0.1942
	After/Limit	0.00084	0.00007	0.00149	0.00029	0.00013	0.00002	0.00411	0.00247	0.06880	0.0782
Disa 1 Pouring and Casting Process	Before	0.04660	0.00368	0.08217	0.01594	0.00736	0.00123	0.22688	0.02480	3.80184	4.2105
EU-323	After	0.00932	0.00074	0.01643	0.00319	0.00147	0.00025	0.04538	0.00496	0.76037	0.8421
	After/Limit	0.00660	0.00052	0.01163	0.00226	0.00104	0.00017	0.03212	0.00496	0.53816	0.5975
Disa 1 Casting Shakeout Process	Before	0.05326	0.00420	0.09391	0.01822	0.00841	0.00140	0.25930	0.00000	4.34496	4.7837
EU-324	After	0.00130	0.00010	0.00229	0.00044	0.00021	0.00003	0.00633	0.00000	0.10602	0.1167
	After/Limit	0.00092	0.00007	0.00162	0.00031	0.00015	0.00002	0.00448	0.00000	0.07503	0.0826
Disa 2 Pouring and Casting Process	Before	0.06990	0.00552	0.12325	0.02391	0.01104	0.00184	0.34033	0.02480	5.70276	6.3034
EU-333	After	0.01398	0.00110	0.02465	0.00478	0.00221	0.00037	0.06807	0.00496	1.14055	1.2607
	After/Limit	0.00990	0.00078	0.01745	0.00339	0.00156	0.00026	0.04817	0.00496	0.80724	0.8937
Disa 2 Shakeout System	Before	0.05326	0.00420	0.09391	0.01822	0.00841	0.00140	0.25930	0.00000	4.34496	4.7837
EU-334	After	0.00017	0.00001	0.00030	0.00006	0.00003	0.00000	0.00083	0.00000	0.01390	0.0153
	After/Limit	0.00012	0.00001	0.00021	0.00004	0.00002	0.00000	0.00059	0.00000	0.00984	0.0108
Disa 1 Shotblast Unit	Before	0.28295	0.02234	0.49888	0.09680	0.04468	0.00745	1.37751	0.00000	23.08260	25.4132
EU-411	After	0.00028	0.00002	0.00050	0.00010	0.00004	0.00001	0.00138	0.00000	0.02308	0.0254
	After/Limit	0.00020	0.00002	0.00035	0.00007	0.00003	0.00001	0.00097	0.00000	0.01634	0.0180
Disa 1 Grinding Process	Before	0.00017	0.00001	0.00029	0.00006	0.00003	0.00000	0.00081	0.00000	0.01358	0.0149
EU-413	After	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.0000
	After/Limit	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.0000
Disa 2 Shotblast Unit	Before	0.28295	0.02234	0.49888	0.09680	0.04468	0.00745	1.37751	0.00000	23.08260	25.4132
EU-431	After	0.00028	0.00002	0.00050	0.00010	0.00004	0.00001	0.00138	0.00000	0.02308	0.0254
	After/Limit	0.00020	0.00002	0.00035	0.00007	0.00003	0.00001	0.00097	0.00000	0.01634	0.0180
Disa 2 Grinding Process	Before	0.00017	0.00001	0.00029	0.00006	0.00003	0.00000	0.00081	0.00000	0.01358	0.0149
EU-433	After	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.0000
	After/Limit	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.0000
Subtotal	**Before**	**0.840**	**0.066**	**1.481**	**0.287**	**0.133**	**0.022**	**4.090**	**0.114**	**68.542**	**75.576**
	After	**0.030**	**0.002**	**0.053**	**0.010**	**0.005**	**0.001**	**0.148**	**0.016**	**2.475**	**2.741**
	After/Limit	**0.020**	**0.002**	**0.035**	**0.007**	**0.003**	**0.001**	**0.098**	**0.016**	**1.638**	**1.820**

Indiana Department of Environmental Management
Office of Air Quality

Appendix B – BACT Analyses
Technical Support Document (TSD)
Prevention of Significant Deterioration (PSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Background and Description

Source Name:	Rochester Metal Products Corporation
Source Location:	616 Indiana Avenue, Rochester, Indiana 46975
County:	Fulton
SIC Code:	3321
Operation Permit No.:	T 049-5999-00002
Operation Permit Issuance Date:	December 22, 2006
Significant Source Modification No.:	049-24381-00002
Significant Permit Modification No.:	049-24477-00002
Permit Reviewer:	Kimberly Cottrell

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following federal BACT (Best Available Control Technology) review for a major modification to an existing major source which is a stationary gray and ductile iron foundry owned and operated by Rochester Metal Products Corp., located in Rochester, Indiana.

Background and Process Description

The purpose of this application is to fulfill the requirements of 326 IAC 2-2, Prevention of Significant Deterioration (PSD). The Part 70 permit issued on December 22, 2006 includes limitations on all process equipment installed prior to the Disa 1 and Disa 2 projects such that emissions for all PSD regulated pollutants from the emission units installed prior to 1996 are limited to less than 100 tons per year (this facility is in one of the 28 categories subject to the 100 tons per year PSD major source threshold). As such the source can be considered a minor source under the PSD rules prior to the construction of the Disa 1 and Disa 2 lines. Under the PSD rules, modifications at a minor source that exceed the major source threshold of 100 tons per year for any of the PSD regulated pollutants, would be considered a major modification and would be subject to review under the PSD rules. Rochester Metal Products Corporation (RMP) constructed the Disa 1 and Disa 2 casting lines along with associated melt equipment in 1996 and 1997. Specifically, the Disa 1 line was constructed in 1996 after receiving a construction permit (No. CP049-4112-00002), and Disa 2 line was constructed 1997 after receiving a separate construction permit (No. CP049-8548-00002). In each case the permits included limitations on PM/PM_{10} and VOC emissions such that the requirements of the PSD rules did not apply. During the Part 70 operating permit review a number of issues were revisited as they related to the applicability of the PSD requirements for these two lines. RMP had proposed limitations on PM, PM_{10} and VOC emissions to limit emissions from the combined Disa 1 and Disa 2 lines to less than 100 tons per year, such that the combined modifications would not have been a major modification under the PSD rules.

During the Part 70 permit review RMP became aware that Carbon Monoxide (CO) emission levels from the pouring, cooling and shakeout processes could exceed the major modification threshold of 100 tons per year. Based on subsequent testing, RMP determined that it could not accept restrictions to limit CO to less than 100 tons per year from the Disa 1 and Disa 2 lines. Therefore, the Disa 1 and Disa 2 lines were determined to be subject to 326 IAC 2-2 (PSD).

The PSD regulations require a source to apply the Best Available Control Technology (BACT) to each pollutant for which a significant net emissions increase will occur as a result of the major modification. Based on the limited PTE of the other regulated NSR pollutants from the Disa 1 and Disa 2 lines and associated melt equipment, it was determined that it would be necessary to have the two lines reviewed under the PSD rules for CO, PM and PM_{10}. The Part 70 permit issued on December 22, 2006 required that a PSD permit application for the Disa 1 and Disa 2 lines be submitted by March 1, 2007 for CO, PM and PM_{10}. RMP submitted a PSD permit application for the Disa 1 and Disa 2 lines on February 28, 2007 with additional information received on September 27, 2007, February 26, 2008, and January 15, 2009. Therefore, BACT analyses for PM, PM_{10} and CO emissions were performed on the emission units associated with the Disa 1 and Disa 2 lines that emit these pollutants.

The Part 70 permit also includes limitations restricting VOC emissions from the Disa 1 and Disa 2 projects to less than 40 tons per year such that the PSD requirements do not apply for VOC emissions.

Since it was determined that the PTE for CO exceeds the PSD major source threshold of 100 tons per year, the source, after the Disa 1 and Disa 2 construction, is also now a major source under the PSD rules.

See Appendix A – Emission Calculations – of this TSD for detailed Potential to Emit (PTE) calculations.

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to significant degradation of air quality, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

> The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories. There is no requirement in the State or Federal regulations to require innovative control to be used as BACT.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative control technology is projected to have equivalent or better emission reductions to the best available control technology. The source has not requested to use an innovative control technology; therefore, the OAQ will not evaluate or require any innovative controls for this BACT analysis. Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. Based on this, the OAQ will not evaluate or require any innovative controls for this BACT analysis. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) was reviewed to obtain recent determinations for PM, PM_{10} and CO from similar processes. The search criteria used was "iron and steel foundries (SIC 3321)" with PM/PM_{10}, and CO as the pollutants. This search was limited to a review of all facilities listed since 1996. Other state permit files were also reviewed, where they were reasonably available, to identify emission limitations for recently permitted foundry sources where they were not already included in the RBLC information. IDEM utilized the information collected to compare the proposed control techniques and emission limitations to be utilized by RMP for the melt system, sand system, pouring, cooling, shakeout, shotblast and grinding processes to the control techniques and emission limitations used by other facilities with similar operations.

BACT for PM/PM_{10} – EIF Melting Furnaces (EU-114 & EU-115); Preheaters (No. 1 & No. 2); Charge Handling (EU-118)

An Electric Induction Furnace (EIF) operates by passing an electric current through a coil either around or below the main body of the furnace. The following units are covered in this BACT determination:

(a) Two (2) natural gas-fired preheaters (No. 1 and No. 2) and a charge handling system, identified as EU-118, modified in 1996, No. 2 preheater approved for construction in 2007, controlled by baghouse DC-9, rated at 7 and 14 million British thermal units per hour for No. 1 and No. 2 preheaters, respectively, exhausted to Stack DC-9, preheater capacities: 13 and 21 tons of metal, respectively, charge system capacity: 34 tons of metal per hour total.

(b) Two (2) electric induction furnaces (4 and 5), identified as EU-114 and EU-115, both constructed in 1996 and controlled by baghouse DC-9, exhausted to Stack DC-9, melt capacity: 10.5 tons of metal per hour each.

(c) Three (3) Hunter electric induction furnaces, identified as EU-131, EU-132 and EU-133, controlled by baghouse DC-13, exhausted to Stack DC-13. These three (3) furnaces were modified in 1997, and EU-133 was also modified in 1999. Nominal capacities: 3, 3, and 7 tons of metal per hour, respectively, 13 tons of metal per hour total.

Step 1 – Identify Control Options

Emissions of particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM_{10}) are generally controlled with add-on control equipment designed to capture the emissions prior to the time they are exhausted to the atmosphere. In cases where the material being emitted is organic, particulate matter may be controlled through a combustion process. Generally, PM and PM_{10} emissions are controlled through one of the following mechanisms:

(1) Mechanical Collectors (such as Cyclones or Multiclones);

(2) Wet Scrubbers;

(3) Electrostatic Precipitators (ESP); and

(4) Fabric Filter Dust Collectors (Baghouses).

The choice of which technology is most appropriate for a specific application depends upon several factors, including particle size to be collected, particle loading, stack gas flow rate, stack gas physical characteristics (e.g., temperature, moisture content, presence of reactive materials), and desired collection efficiency.

Steps 2 & 3 – Eliminate Technically Infeasible Control Options and Rank Remaining Control Options by Control Effectiveness

The RBLC and review of other New Source Review (NSR) permits reveal that similar sources use baghouses for controlling particulate matter emissions from electric induction furnaces, natural gas-fired preheaters, and charge handling systems. The emission limits established pursuant to BACT that rely on baghouses for control have been demonstrated achievable in practice through stack testing. Therefore, baghouses are technically feasible and are considered the most effective control option for control of particulate emissions from the above listed emission units.

Step 4 - Evaluate Control Options

Table 1 lists previous BACT determinations for iron foundries in the United States, as provided by the RBLC and other IDEM permits, for PM/PM_{10} control from EIFs.

Table 1: Comparison of PM and PM_{10} limits for Electric Induction Furnaces

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Electric Induction Furnaces 4 and 5 (EU-114 and EU-115), Natural gas preheaters (No. 1 and No. 2), charge handling (EU-118)	PM = 0.003 gr/dscf; 0.98 lbs/hr; PM_{10} = 1.0 lbs/hr	Baghouse to be used for control of PM and PM_{10} emissions.
Rochester Metal Products Corp., Rochester, IN	Proposed	Hunter electric induction furnaces (EU-131, EU-132 & EU-133)	PM = 0.003 gr/dscf; 07 lbs/hr; PM_{10} = 0.7 lbs/hr	Baghouse to be used for control of PM and PM_{10} emissions.
Casting Service, LaPorte, IN	5/11/06	Electric Induction Furnaces (F1 through F5)	PM = 0.002 gr/dscf*, 1.48 lbs/hr, and 0.216 lb/ton metal throughput, PM_{10} = 0.005 gr/dscf, 3.71 lbs/hr, and 0.54 lb/ton metal throughput	Dust collector for control of PM and PM_{10} emissions.
INTAT Precision, Inc., Rushville, IN – Permit No. T139-18320-00011	9/2/2003	Melting System (P8), Metal Treatment (P11), and Pouring (P13B)	PM = 0.003 gr/dscf, PM_{10} = 0.633 lb/ton of metal throughput (this includes metal pouring), metal throughput = 79,000 tons/yr.	Baghouse is used for control of PM and PM_{10} emissions.
Ardmore Foundry, Inc., Oklahoma City, OK – RBLC ID OK-0077	9/4/2001	Electric Induction Furnace Melting Operations	PM_{10} = 0.0045 gr/dscf.	Baghouses are used for control of PM and PM_{10} emissions.
Aarrow Cast, Shawano, WI – RBLC ID WI-0161	10/1/1998	Electric Induction Furnaces (P24, S24 (6))	PM = 0.01 gr/dscf and 8.57 lbs/hr, visible emissions = 20% opacity.	Baghouse is used for control of PM emissions.

The most stringent required level of control that has been demonstrated in practice is an emission limitation of 0.002 gr/dscf for the EIFs in operation at Casting Service, in LaPorte, Indiana. Although this PM emission limit in gr/dscf is more stringent than what is proposed for RMP, the equivalent pound per hour emission rate for the EIFs at RMP are more stringent than for Casting Service. Also, IDEM has proposed for RMP to meet a filterable particulate limit of 0.003 gr/dscf for the EIF furnaces, and does not believe that a lower limit of 0.002 gr/dscf provides sufficient flexibility to ensure continued compliance.

In October of 2007 RMP tested dust collector DC-9 which controls the EIFs in conjunction with the compliance demonstration under the MACT standard. In both cases the results showed average grain loading levels below 0.002 gr/dscf. Although this level of control is technically achievable, this level of control may not be guaranteed on a long term basis.

The technology required to meet either a 0.002 or 0.003 gr/dscf PM filterable limit is essentially the same (i.e. a well designed, maintained and operated fabric filter baghouse). The lower limit does not represent different technology, but rather the difference is the margin of compliance that may be appropriate to ensure ongoing compliance with the BACT limit.

The difference in emissions from the DC-9 and DC-13 collectors meeting 0.002 gr/dscf vs. 0.003 gr/dscf limit would be very small (a 0.001 gr/dscf difference) and the total potential annual emissions would also be small for these two collectors. This can be estimated using the difference in the proposed grain loadings (0.001 gr/dscf) the combined exhaust air flow from the two collectors (35,257 + 25,100 = 50,357 dscfm), the melt capacity of the two systems (21 + 13 = 34 tons/hour) and the total annual metal throughput limit (84,000 + 45,000 = 129,000 tons/year) as shown below:

$$\frac{0.001 \text{ gr/dscf} \times 50{,}357 \text{ dscfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.432 \text{ lb/hr}$$

$$\frac{0.432 \text{ lb/hr}}{34 \text{ tons metal/hr}} = 0.0127 \text{ lbs/ton metal}$$

$$\frac{0.0127 \text{ lb/ton metal} \times 129{,}000 \text{ tons metal/yr}}{2000 \text{ lb/ton}} = 0.81 \text{ tons/yr}$$

IDEM is aware that 0.002 gr/dscf may be achievable; however, BACT limitations do not necessarily need to reflect the lowest possible emission rate achievable by the technology on which the emission limitation is based. The permitting authority has discretion to base the emission limitation on an emission rate that is somewhat lower than the optimal level.

Step 5 – Select BACT

After reviewing the RBLC database, a baghouse dust collector was chosen as BACT for the electric induction furnaces, preheaters and charge handling. Although a lower BACT limit of 0.002 gr/dscf was found at another source, this has not been determined to be BACT because this limit has only been verified once in a stack test and has not been demonstrated to be achievable on a long term basis. Since the “top-down” approach (US EPA, 1990) was utilized and the most stringent emission limitation that is achievable in practice by a class or category of emission sources was selected as BACT, no further economic cost effectiveness analysis was performed.

The following emission limits have been determined to satisfy the requirement for BACT for the EIF melting system:

(a) PM emissions from the baghouse DC-9 controlling emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.98 pound per hour.

(b) PM_{10} emissions from the baghouse DC-9 controlling emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115) shall not exceed 1.0 pound per hour.

(c) A baghouse (DC-9) shall be in operation and control PM and PM_{10} emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115) at all times these units are in operation.

(d) PM emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.003 grains per dry standard cubic foot (gr/dscf) of exhaust air and 0.7 pound per hour.

(e) PM_{10} emissions from the baghouse DC-13 controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) shall not exceed 0.7 pound per hour.

(f) A baghouse (DC-13) shall be in operation and control PM and PM_{10} emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133) at all times these units are in operation.

Since the EIFs are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR 63, Subpart EEEEE, the EIFs would also be subject to a PM limit of 0.005 gr/dscf under that rule. Therefore, compliance with the BACT limit for PM listed above will ensure compliance with the PM limit pursuant to the NESHAP, 40 CFR 63, Subpart EEEEE.

BACT for PM/PM_{10} – Disa 1 & Disa 2 Pouring and Cooling (EU-323 & EU-333)

The reaction between the sand mold/core and the molten metal during pouring and cooling operations produces PM/PM_{10} emissions. Emissions of PM/PM_{10} from pouring and cooling mainly consist of byproducts from the organic material (e.g. seacoal, chemical binders, etc.) contained in the mold/core sand. The following units are covered in this BACT determination:

(a) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour; and

(b) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

RMP will be constructing a new stack into which both pouring and cooling processes will feed. After completion of this project, the emission units will be identified as follows:

(a) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour; and

(b) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

Step 1 – Identify Control Options

As discussed above, PM and PM_{10} emissions are controlled through one of the following mechanisms:

(1) Mechanical Collectors (such as Cyclones or Multiclones);

(2) Wet Scrubbers;

(3) Electrostatic Precipitators (ESP); and

(4) Fabric Filter Dust Collectors (Baghouses).

Steps 2 & 3 – Eliminate Technically Infeasible Control Options and Rank Remaining Control Options by Control Effectiveness

The RBLC and review of other NSR permits reveal that similar sources use baghouses for controlling particulate matter emissions from pouring and cooling operations. Since the emission limits established pursuant to BACT that rely on baghouses for control have been demonstrated achievable in practice through stack testing, baghouses are technically feasible and are considered the most effective control option for control of particulate emissions from pouring and cooling operations.

Although the other sources identified in the RBLC database search use a baghouse for particulate control, IDEM is proposing for RMP to continue to use the in-line filters for particulate control. RMP achieves equivalent emission reductions with the in-line filter currently used at the facility as would be achieved with a traditional baghouse to control emissions. Stack testing on the pouring and cooling stacks conducted in October 2007 showed filterable grain loadings below 0.003 gr/dscf with the in-line filters as control.

Step 4 - Evaluate Control Options

Table 2 lists previous BACT determinations for iron foundries in the United States, as provided by the RBLC and other IDEM permits for PM/PM_{10} control from pouring/cooling lines.

Table 2: Comparison of PM and PM_{10} limits for Pouring and Cooling

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 1 Pouring and Cooling process	PM = 0.005 gr/dscf; 0.8 lb/hr); PM_{10} = 2.5 lb/hr	In-line filters to be used for control of PM and PM_{10} emissions.
		Disa 2 Pouring and Cooling process	PM = 0.005 gr/dscf; 0.93 lb/hr); PM_{10} = 2.5 lb/hr	
Thyssen Krupp Plant 1, Waupaca, WI – RBLC ID WI-0238	1/12/2006	Pouring & Cooling	PM = 0.005 gr/dscf	Baghouse for PM control

Table 2: Comparison of PM and PM_{10} limits for Pouring and Cooling

Company	Date Issued	Facility Description	BACT determined	Comments
Thyssen Krupp Plant 2, Waupaca, WI – RBLC ID WI-0237	12/5/2005	Pouring & Cooling	PM = 0.005 gr/dscf	Baghouse for PM control
Waupaca Foundry Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0190	6/11/2002	Pouring/mold cooling, Disa Line 4	PM/PM_{10} = 0.6 lb/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Brillion Iron Works, Calumet, WI – RBLC ID WI-0092	8/6/1997	Casting pouring line	PM = 0.8 lb/hr	Ductile treatment baghouse for PM control
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0184	5/27/1999	P71 Line 1 Cast Cooler	PM/PM_{10} = 0.005 gr/dscf and 1.03 lbs/hr	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Pouring/cooling process, Lines 6&8, phase II	PM = 0.005 gr/dscf and 1.71 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0184	5/27/1999	P70 Line 1 Cast Cooler	PM/PM_{10} = 0.005 gr/dscf and 1.714 lbs/hr	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0160	12/22/1999	Cast Cooling	PM/PM_{10} = 1.714 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Cast cooling process, Line 8, phase II	PM = 0.005 gr/dscf and 2.31 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Pouring/cooling - existing	PM = 0.005 gr/dscf and 2.36 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Cooling process, Cast, Existing Line 1	PM = 0.005 gr/dscf and 2.79 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Cast cooling process, Line 6, phase II	PM = 0.005 gr/dscf and 3 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Pouring/cooling process, Line 5, phase 2	PM = 0.005 gr/dscf and 4.33 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Pouring/cooling process, Line 7, phase II	PM = 0.005 gr/dscf and 4.33 lbs/hr	Baghouse for PM control

Table 2: Comparison of PM and PM_{10} limits for Pouring and Cooling

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Iron foundry casting cooling (4 lines)	PM = 0.005 gr/dscf and 4.72 lbs/hr	Fabric Filter for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Iron foundry pouring/mold cooling (4 lines)	PM = 0.005 gr/dscf and 7.16 lbs/hr	Fabric Filter for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0131	8/24/2001	Phase I, Mold cooling and shakeout, Lines 1 and 2	PM = 0.005 gr/dscf and 8.8 lbs/hr (each line)	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0131	8/24/2001	Phase I, Mold cooling and shakeout, Lines 3 and 4	PM = 0.005 gr/dscf and 8.9 lbs/hr (each line)	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN 0063	4/29/2000	Mold cooling & shakeout, cast handling & finishing	PM/PM_{10} = 34.6 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0179	7/1/1998	Pouring/cooling DISA Line 2	PM/PM_{10} = 0.006 gr/dscf and 0.48 lb/hr	Baghouse for PM/PM_{10} control
Grede Foundries, Inc., Dickinson, MI – RBLC ID MI-0370	11/25/2004	Pouring & Cooling	PM = 0.01 gr/dscf, PM_{10} = 9 lbs/hr	No add on controls required.

The most stringent required level of control identified for pouring and cooling is a PM emission limit of 0.005 gr/dscf (filterable only), a /PM_{10} limit in pounds per hour (lb/hr), and use of a fabric filter baghouse. This limit is only for filterable emissions. IDEM proposes the use of in-line filters with a PM limit of 0.005 gr/dscf and a PM_{10} limit of 2.5 lb/hr for each of the Pouring and Cooling lines.

Step 5 – Select BACT

After reviewing the RBLC database, use of in-line filters was chosen as BACT for the Disa 1 Pouring and Cooling process and Disa 2 Pouring and Cooling process because these filters can guarantee the same level of control as would be provided by a baghouse. Since the “top-down” approach (US EPA, 1990) was utilized and the most stringent emission limitation that is achievable in practice by a class or category of emission sources was selected as BACT, no further economic cost effectiveness analysis was performed.

The following emission limits have been determined to satisfy the requirement for BACT for the Disa 1 Pouring and Cooling process and the Disa 2 Pouring and Cooling process:

(a) PM emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 0.005 gr/dscf of exhaust air and 0.8 pound per hour.

(b) PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 2.5 pound per hour.

(c) PM emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 0.005 gr/dscf of exhaust air and 0.93 pound per hour.

(d) PM_{10} emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 2.5 pound per hour.

(e) The in-line filters (D-333) shall be in operation and control PM and PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) and the Disa 2 Pouring and Cooling process (EU-333) at all times that these facilities are in operation.

BACT for PM/PM_{10} – Disa 1/Disa 2 sand systems (EU-321), Disa 2 Sand Muller (EU-331), Disa 1 Casting Shakeout (EU-324), Disa 2 Shakeout System (EU-334), Disa 1 Casting Cooling (EU-325), Disa 2 Casting Cooling (EU-335), Disa 1 Shotblast Unit (EU-411), Disa 2 Shotblast Unit (EU-431), Disa 1 Grinding (EU-413), & Disa 2 Grinding (EU-433)

The above listed processes generate PM and PM_{10} emissions and all are currently controlled using baghouse controls. The review for these processes has been combined for the following reasons:

1) The Disa 1/Disa 2 sand systems and the Disa 1 casting cooling process are controlled by a common baghouse and all three processes are exhausted through a common stack.

2) The Disa 2 Sand Muller and the Disa 2 shakeout system are controlled by a common baghouse and stack.

3) The Disa 1 shotblast unit, the Disa 1 grinding process, and the Disa 2 shotblast unit are controlled by a common baghouse which exhausts internally.

4) The Disa 2 casting cooling process and the Disa 2 grinding process are controlled by a common baghouse which exhausts internally.

Emissions from the sand system, shakeout and casting cooling processes include both solid particles as well as condensable emissions.

The following units are covered by this BACT determination:

(a) One (1) Disa 1/Disa 2 sand systems, identified as EU-321, constructed in 1996, controlled by baghouse DC-6, exhausted to Stack DC-6/7, nominal capacity: 120 tons of sand per hour.

(b) One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(c) One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6, exhausted to Stack DC-6/7, and DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(d) One (1) Disa 2 sand muller, identified as EU-331, constructed in 1997, controlled by baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 70 tons of sand per hour.

(e) One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(f) One (1) Disa 1 shotblast unit, identified as EU-411, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(g) One (1) Disa 1 grinding process, identified as EU-413, consisting of various stationary and hand-held grinding units, constructed in 1996, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

(h) One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(i) One (1) Disa 2 shotblast unit, identified as EU-431, constructed in 1997, controlled by baghouse DC-8, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(j) One (1) Disa 2 grinding process, identified as EU-433, consisting of various stationary and hand-held grinding units, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour total, maximum capacity: 10 tons of metal per hour total.

Step 1 – Identify Control Options

As discussed above, PM and PM_{10} emissions are controlled through one of the following mechanisms:

(1) Mechanical Collectors (such as Cyclones or Multiclones);

(2) Wet Scrubbers;

(3) Electrostatic Precipitators (ESP); and

(4) Fabric Filter Dust Collectors (Baghouses).

Steps 2 & 3 – Eliminate Technically Infeasible Control Options and Rank Remaining Control Options by Control Effectiveness

The RBLC and review of other NSR permits reveal that similar sources use baghouses for controlling particulate matter emissions from sand handling, shakeout, casting cooling, shotblast, and grinding operations. The baghouse is technically feasible for control of particulate emissions from the above listed emission units, and is considered the most effective control option and therefore the top control option.

Step 4 - Evaluate Control Options

Tables 3 and 4 show recent BACT determinations for PM/PM_{10} control for sand handling, shakeout, casting cooling, shotblast, and grinding operations s for iron foundries in the United States, as provided by the RBLC and other IDEM permits.

Table 3: Comparison of PM and PM_{10} limits for Casting Cooling, Sand Handling, and Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 1/Disa 2 sand systems (EU-321) - *DC-6*; Disa 1 shakeout process (EU-324) - *DC-7*; Disa 1 casting cooling process (EU-325) - *DC-6 only*	*Stack DC-6/7:* PM = 0.003 gr/dscf; 2.36 lb/hr; PM_{10} = 4.6 lb/hr	Baghouse to be used for control of PM and PM_{10} emissions.
		Disa 2 Sand Muller (EU-331); Disa 2 Shakeout (EU-334)	*DC-11:* PM = 0.003 gr/dscf; 1.21 lb/hr; PM_{10} = 1.0 lb/hr	
INTAT Precision, Inc., Rushville, IN – Permit No. T139-18320-00011	9/2/2003	Sand handling (P32B – P37B, P39B)	Filterable PM_{10} = 0.003 gr/dscf and 1.13 lbs/hr, Filterable and condensable PM_{10} = 0.02 lb/ton of metal throughput	Baghouse for PM/PM_{10} control
INTAT Precision, Inc., Rushville, IN – Permit No. T139-18320-00011	9/2/2003	Casting Cooling (P14B) and Shakeout (P16B) controlled by a common baghouse	Filterable PM_{10} = 0.003 gr/dscf and 2.85 lbs/hr, Filterable and condensable PM_{10} = 1.045 lb/ton of metal throughput (this also includes casting conveying)	Baghouse for PM/PM_{10} control
Thyssen Krupp Plant 1, Waupaca, WI – RBLC ID WI-0238	1/12/2006	Sand Handling & Shakeout	PM = 0.005 gr/dscf	Baghouse for PM control
Thyssen Krupp Plant 2, Waupaca, WI – RBLC ID WI-0237	12/5/2005	Sand Handling & Shakeout	PM = 0.005 gr/dscf	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Material handling system, sand, existing	PM = 0.005 gr/dscf	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Material handling system, core sand, phenolic urethane	PM = 0.005 gr/dscf and 0.21 lb/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0184	5/27/1999	Sand cooler	PM_{10} = 0.005 gr/dscf and 0.43 lb/hr	Baghouse for PM/PM_{10} control

Table 3: Comparison of PM and PM_{10} limits for Casting Cooling, Sand Handling, and Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN 0067	4/28/2000	Core sand handling	PM/PM_{10} = 0.9 lb/hr and 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0184	5/27/1999	Sand Handling	PM_{10} = 0.005 gr/dscf and 1.56 lbs/hr	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Material handling system, sand, phase II	PM = 0.005 gr/dscf and 7.1 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0132	8/24/2001	Phase I Sand System	PM = 0.005 gr/dscf and 14.9 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0094	6/05/2001	Core sand handling	PM = 0.005 gr/dscf and 34.3 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plants 2 & 3, Waupaca, WI – RBLC ID WI-0157	10/13/1999	Core Sand Handling	PM_{10} = 0.58 lb/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plants 2 & 3, Waupaca, WI – RBLC ID WI-0157	10/13/1999	Sand Handling	PM_{10} = 1.91 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plants 2 & 3, Waupaca, WI – RBLC ID WI-0157	10/13/1999	Waste Sand Handling	PM_{10} = 2.11 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN 0064	4/28/2000	Sand prep, return and cooling	PM/PM_{10} = 8.4 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Shakeout Line 1	PM = 0.005 gr/dscf	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0160	12/22/1999	Shakeout Line 1	PM/PM_{10} = 0.771 lb/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0160	12/22/1999	Shakeout Line 2	PM/PM_{10} = 0.771 lb/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control

Table 3: Comparison of PM and PM_{10} limits for Casting Cooling, Sand Handling, and Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Shakeout Line 6, phase II	PM = 0.005 gr/dscf and 1.17 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Shakeout Line 8, phase II	PM = 0.005 gr/dscf and 1.71 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/4/1998	Shakeout Line 5, phase II	PM = 0.005 gr/dscf and 2.14 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN 0063	4/29/2000	Mold cooling & shakeout, cast handling & finishing	PM/PM_{10} = 34.6 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Sand system	PM = 0.005 gr/dscf and 822.9 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Shakeout (4 lines)	PM = 0.005 gr/dscf and 6.84 lbs/hr	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0131	8/24/2001	Phase I, Mold cooling and shakeout, Lines 1 and 2	PM = 0.005 gr/dscf and 8.8 lbs/hr (each line)	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0131	8/24/2001	Phase I, Mold cooling and shakeout, Lines 3 and 4	PM = 0.005 gr/dscf and 8.9 lbs/hr (each line)	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0179	7/01/1998	Disa Line 2 shakeout	PM/PM_{10} = 0.007 gr/dscf and 0.45 lb/hr	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0184	5/27/1999	Disa Line 3 shakeout	PM/PM_{10} = 0.007 gr/dscf and 0.9 lb/hr	Baghouse for PM/PM_{10} control
Waupaca Foundry Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0190	6/11/2002	Shakeout Disa Line 4	PM/PM_{10} = 0.9 lb/hr standardized to 0.007 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN 0072	4/28/2000	Sand system – molding, handling & return	PM/PM_{10} = 9.1 lbs/hr	Baghouse for PM/PM_{10} control

Table 3: Comparison of PM and PM_{10} limits for Casting Cooling, Sand Handling, and Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Aarrow Cast, Shawano, WI – RBLC ID WI-0161	10/1/1998	Sand handling	PM = 0.005 gr/dscf and 7.93 lbs/hr, visible emissions shall not exceed 20% opacity	Baghouse for PM control
Grede Foundries, Inc., Dickinson, MI – RBLC ID MI-0370	11/25/2004	Sand Handling	PM_{10} = 1.3 lb/hr and 5.6 tons/yr.	Wet dust collector for PM/PM_{10} control
Grede Foundries, Inc., Dickinson, MI – RBLC ID MI-0370	11/25/2004	Shakeout	PM_{10} = 1.03 lb/hr and 4.51 tons/yr.	Wet dust collector for PM/PM_{10} control

Table 4: Comparison of PM and PM_{10} limits for Shotblast and Grinding

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 2 Casting Cooling (EU-335) and Disa 2 Grinding (EU-433)	DC-12: PM = 0.003 gr/dscf; 0.84 lb/hr; PM_{10} = 0.84 lb/hr	Baghouse to be used for control of PM and PM_{10} emissions.
		Disa 1 Casting Cooling (EU-325) - *DC-8 only*, Disa 1 Shot Blast (EU-411), Disa 2 Shot Blast (EU-431), and Disa 1 Grinding (EU-413)	DC-8: PM = 0.003 gr/dscf; 0.42 lb/hr; PM_{10} = 0.42 lb/hr	
INTAT Precision, Inc., Rushville, IN – Permit No. T139-18320-00011	9/2/2003	Shotblast (P40, P41 and P42)	Filterable PM_{10} = 0.003 gr/dscf and 1.03 lbs/hr, Filterable and condensable PM_{10} = 0.085 lb/ton of metal throughput (this also includes casting conveying)	Baghouse for PM/PM_{10} control
Thyssen Krupp Plant 1, Waupaca, WI – RBLC ID WI-0238	1/12/2006	Cleaning and grinding	PM = 0.005 gr/dscf	Baghouse for PM control
Thyssen Krupp Plant 2, Waupaca, WI – RBLC ID WI-0237	12/5/2005	Cleaning and grinding	PM = 0.005 gr/dscf	Baghouse for PM control
AK Steel Corporation, Spencer, IN – RBLC ID IN-0100	2/13/1997	Shot Blaster Chamber	PM = 0.006 lb/hr	Baghouse for PM control

Table 4: Comparison of PM and PM_{10} limits for Shotblast and Grinding				
Company	**Date Issued**	**Facility Description**	**BACT determined**	**Comments**
Waupaca Foundry, Inc. – Perry, IN – RBLC ID IN-0089	1/31/2001	Tumbleblast shotblast machine	PM_{10} = 0.005 gr/dscf and 0.86 lb/hr	Baghouse for PM and PM_{10} control
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RLBC ID WI-0160	12/22/1999	Cleaning/Grinding	PM = 0.579 lb/hr standardized to 0.005 gr/dscf	Baghouse for PM control
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Cleaning and Grinding lines (4)	PM = 0.005 gr/dscf and 2.76 lbs/hr.	Baghouse for PM control
Waupaca Foundry, Inc., Tell City, IN, Part 70 Operating Permit No. T123-9234-00019	6/29/2004	Cleaning and grinding operations	PM = 0.005 gr/dscf	Baghouse for PM control

The most stringent required level of control identified for sand handling, shakeout, casting cooling, shotblast, and grinding operations is a PM emission limit of 0.003 gr/dscf (filterable only), a /PM_{10} limit in pounds per hour (lb/hr), and use of a fabric filter baghouse. This limit is only for filterable emissions. IDEM proposes the use of baghouse dust collectors with a PM limit of 0.003 gr/dscf and a PM_{10} limits in pounds per hour (lb/hr) for each of the sand handling, shakeout, casting cooling, shotblast, and grinding operations.

Step 5 – Select BACT

After reviewing the RBLC database, a baghouse dust collector was chosen as BACT for the Disa 1 / Disa 2 Sand Systems (EU-321), the Disa 1 and Disa 2 shakeout processes (EU-324 and EU-334), the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), the Disa 1 Grinding (EU-413), the Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433). Since the “top-down” approach (US EPA, 1990) was utilized and the most stringent emission limitation that is achievable in practice by a class or category of emission sources was selected as BACT, no further economic cost effectiveness analysis was performed.

The following emission limits have been determined to satisfy the requirement for BACT for the Disa 1 / Disa 2 Sand Systems (EU-321), the Disa 1 and Disa 2 shakeout processes (EU-324 and EU-334), the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), the Disa 1 Grinding (EU-413), the Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433):

(a) Total PM emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 0.003 gr/dscf of exhaust air and 2.36 pounds per hour.

(b) Total PM_{10} emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 4.6 pound per hour.

(c) The baghouse DC-6 shall be in operation and control PM and PM_{10} emissions from the Disa 1/Disa 2 sand systems (EU-321) and the Disa 1 Casting Cooling (EU-325) at all times these units are in operation.

(d) The baghouse DC-7 shall be in operation and control PM and PM_{10} emissions from the Disa 1 Shakeout (EU-324) at all times this unit is in operation.

(e) PM emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.003 gr/dscf of exhaust air and 0.42 pound per hour.

(f) PM_{10} emissions from the baghouse DC-8, exhausting internally and controlling emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413), shall not exceed 0.42 pound per hour.

(g) The baghouse DC-8 shall be in operation and control PM and PM_{10} emissions from the Disa 1 Casting Cooling (EU-325), the Disa 1 Shot Blast (EU-411), the Disa 2 Shot Blast (EU-431), and the Disa 1 Grinding (EU-413) at all times these units are in operation.

(h) PM emissions from the baghouse DC-11, exhausting through stack DC-11 and controlling emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334), shall not exceed 0.003 gr/dscf of exhaust air and 1.21 pounds per hour.

(i) PM_{10} emissions from the baghouse DC-11, exhausting through stack DC-11 and controlling emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334), shall not exceed 1.0 pounds per hour.

(j) The baghouse DC-11 shall be in operation and control PM and PM_{10} emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334) at all times these units are in operation.

(k) PM emissions from the baghouse DC-12, exhausting internally and controlling emissions from Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433), shall not exceed 0.003 gr/dscf of exhaust air and 0.84 pound per hour.

(l) PM_{10} emissions from the baghouse DC-12, exhausting internally and controlling emissions from Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433), shall not exceed 0.84 pound per hour.

(m) The baghouse DC-12 shall be in operation and control PM and PM_{10} emissions from the Disa 2 Casting Cooling (EU-335) and the Disa 2 Grinding (EU-433) at all times these units are in operation.

BACT for PM/PM_{10} – Magnesium Treatment System (EU-119)

The magnesium treatment system is a process involved in the manufacture of ductile iron that is controlled by dust collector DC-10 which is internally vented. The following units are covered by this BACT determination:

One (1) Disa magnesium treatment system, identified as EU-119, modified in 1997, controlled by baghouse DC-10, exhausted internally, nominal capacity: 20 tons of metal per hour.

Step 1 – Identify Control Options

As discussed above, PM and PM_{10} emissions are controlled through one of the following mechanisms:

(1) Mechanical Collectors (such as Cyclones or Multiclones);

(2) Wet Scrubbers;

(3) Electrostatic Precipitators (ESP); and

(4) Fabric Filter Dust Collectors (Baghouses).

Steps 2 & 3 – Eliminate Technically Infeasible Control Options and Rank Remaining Control Options by Control Effectiveness

The RBLC and review of other NSR permits reveal that similar sources use baghouses for controlling particulate matter emissions from magnesium treatment operations. The baghouse is technically feasible for control of particulate emissions from the above listed emission units, and is considered the most effective control option and therefore the top control option.

Step 4 - Evaluate Control Options

Table 5 shows recent BACT determinations for PM/PM_{10} control of magnesium treatment operations at iron foundries in the United States, as provided by the RBLC and other IDEM permits.

Table 5: Comparison of PM and PM_{10} limits for Magnesium Treatment

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	**Disa** Magnesium Treatment System (EU-119)	PM = 0.003 gr/dscf; 0.13 lb/hr PM_{10} = 0.13 lb/hr	Baghouse to be used for control of PM and PM_{10} emissions.
INTAT Precision, Inc., Rushville, IN – Permit No. T139-18320-00011	9/2/2003	Metal Treatment (P11)	Filterable PM_{10} = 0.003 gr/dscf and 1.7 lbs/hr, Filterable and condensable PM_{10} = 0.633 lb/ton of metal throughput (this also includes melting and pouring)	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc., McMinn, TN – RBLC ID TN-0076	4/28/2000	Ductile iron treatment	PM = 2.6 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM control
Waupaca Foundry, Plants 2 & 3, Waupaca, WI – RBLC ID WI-0159	7/16/1999	Molten Iron Handling and Alloy addition	PM_{10} = 5.8 lbs/hr standardized to 0.005 gr/dscf	Baghouse for PM/PM_{10} control
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0138	8/24/2001	Phase I Ductile Iron treatment	PM = 0.005 gr/dscf and 10.3 lbs/hr	Baghouse for PM control

Table 5: Comparison of PM and PM_{10} limits for Magnesium Treatment				
Company	**Date Issued**	**Facility Description**	**BACT determined**	**Comments**
Waupaca Foundry, Inc. – Plant 5, Tell City, IN – RBLC ID IN-0078	2/04/1998	Treatment Station, Ductile Iron	PM = 0.005 gr/dscf and 2.14 lbs/hr	Baghouse for PM control

The most stringent required level of control identified for magnesium treatment operations is a PM/PM_{10} emission limit of 0.003 gr/dscf using a baghouse to control emissions. IDEM proposes the use of a fabric filter baghouse meeting a PM/PM_{10} filterable emission limit of 0.003 gr/dscf as BACT for the Disa magnesium treatment system.

Step 5 – Select BACT

After reviewing the RBLC database, a baghouse dust collector was chosen as BACT to control particulate emissions from the Disa magnesium treatment system (EU-119). Since the "top-down" approach (US EPA, 1990) was utilized and the most stringent emission limitation that is achievable in practice by a class or category of emission sources was selected as BACT, no further economic cost effectiveness analysis was performed.

The following emission limits have been determined to satisfy the requirement for BACT for the magnesium treatment system (EU-119):

(a) PM emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.003 gr/dscf of exhaust air and 0.13 pound per hour.

(b) PM_{10} emissions from the baghouse DC-10 controlling emissions from the Disa magnesium treatment system (EU-119) shall not exceed 0.13 pound per hour.

(c) A baghouse (DC-10) shall be in operation and control PM and PM_{10} emissions from the Disa magnesium treatment system (EU-119) at all times this unit is in operation.

BACT for PM/PM_{10} – Core Sand Storage Silo (EU-201), Disa Sand Storage Silo & Disa Bond Storage Silo (EU-202), & Disa New Sand Day Bin (EU-DNS)

The Disa core making operations include a core sand silo (EU-201) controlled by a bin vent filter, exhausted internally, and the core sand mixer, which is controlled by the DC-6 dust collector. In the core sand mixer the materials are wetted and PM emissions would not be generated in processes down stream of the mixer. Any emissions from the loading of sand into the mixer would be accounted for in the limits imposed on the DC-6 dust collector which controls the overall sand system. Emissions from the core sand silo would occur during loading of the sand and the flow rate through the sand silo on an annual basis would be from the displaced volume of air equivalent to the volume of sand loaded. The combined hourly potential production of the three core machines is 0.85 tons/hour. Each ton of sand would displace approximately 30 ft^3 of air, so the average hourly exhaust flow rate would be approximately 25 cfm. The bin vent filter is proposed as BACT to meet a limit of 0.003 gr/dscf, and the resulting limited potential to emit from the core sand silo controlled by the bin vent filter would be 0.003 tons/year.

The Disa lines also include sand and bond storage facilities that are controlled with bin vent filters and exhausted externally (EU-202) and a new sand day bin also controlled by a bin vent filter and exhausted internally. Again, the air flow rate through these storage facilities would be equal to the air displaced from the loading of the storage silos and day sand bin. For the sand silo and day bin the annual sand throughput is limited by the overall production limit of 84,000 tons of metal poured and the average sand to metal ratio of 6:1. The annual potential sand throughput for both the Disa 1 & 2 lines is 504,000 tons of sand. The displaced volume of this sand is approximately 15 million cfm annually which equates to an average hourly flow rate of 1726 cfm. The potential emissions at a 0.003 gr/dscf emission rate would be 0.19 tons/year.

The following units are covered by this BACT determination:

(a) One (1) core sand storage silo, identified as EU-201, constructed in 1996, controlled by a bin vent filter, exhausted to bin vent, capacity: 30 tons of core sand and 0.85 tons of core sand per hour.

(b) One (1) Disa sand storage silo and one (1) Disa bond storage silo, identified as EU-202, controlled by bin vent filters, capacity: 10 tons of sand per hour and 10 tons of bond per hour, respectively, storage capacity: 80 tons of sand and 70 tons of bond, respectively.

(c) One (1) Disa New Sand Day Bin, identified as EU-DNS, controlled by a bin vent, internally vented, constructed in 1996, capacity: 10 tons of sand and 66 tons of sand per hour.

Step 1 – Identify Control Options

As discussed above, PM and PM_{10} emissions are controlled through one of the following mechanisms:

(1) Mechanical Collectors (such as Cyclones or Multiclones);

(2) Wet Scrubbers;

(3) Electrostatic Precipitators (ESP); and

(4) Fabric Filter Dust Collectors (Baghouses).

Steps 2 & 3 – Eliminate Technically Infeasible Control Options and Rank Remaining Control Options by Control Effectiveness

The RBLC and review of other NSR permits reveal that similar sources use baghouses for controlling particulate matter emissions from core sand storage operations. Only one other BACT determination was found on the RBLC database for PM/PM_{10} control of core sand storage operations. The BACT analysis for the Disa 1 and Disa 2 Sand Systems also describe BACT determinations for sand handling operations.

Baghouses and bin vent filters are technically feasible for control of particulate emissions from the above listed emission units. Since use of the bin vent filters can achieve a more stringent limitation than the most stringent BACT determination found on the RBLC database for PM/PM_{10} control of core sand storage operations, the use of the bin vent filters satisfy the requirements of BACT.

Step 4 - Evaluate Control Options

Table 6 shows the only other BACT determination found on the RBLC database for PM/PM_{10} control of core sand storage operations. The BACT analysis for the Disa 1 and Disa 2 Sand Systems include other BACT determinations for sand handling operations.

Table 6: Comparison of PM and PM_{10} limits for Core Sand Storage Operations

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Core sand storage silo (EU-201)	PM = 0.003 gr/dscf; 0.001 lb/hr PM_{10} = 0.001 lb/hr	Bin vent filters to be used for control of PM and PM_{10} emissions.
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa sand storage silo and Disa bond storage silo (EU-202)	PM = 0.003 gr/dscf; 0.04 lb/hr PM_{10} = 0.04 lb/hr	Bin vent filters to be used for control of PM and PM_{10} emissions.
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa New Sand Day bin (EU-DNS)	PM = 0.003 gr/dscf; 0.04 lb/hr PM_{10} = 0.04 lb/hr	Bin vent filters to be used for control of PM and PM_{10} emissions.
Thyssen Krupp Plant 1, Waupaca, WI – RBLC ID WI-0238	1/12/2006	Sand Mullers	PM = 0.005 gr/dscf	Baghouse for PM control

Only one other BACT determination was found on the RBLC database for PM/PM_{10} control of core sand storage operations. That determination had a PM/PM_{10} emission limit of 0.005 gr/dscf using a baghouse to control emissions. The BACT analysis for the Disa 1 and Disa 2 Sand Systems also describe BACT determinations for sand handling operations, in which the most stringent required level of control identified for sand handling is a PM/PM_{10} emission limit of 0.003 gr/dscf using a fabric filter baghouse.

IDEM proposes the use of a bin vent filter meeting a PM/PM_{10} emission limit of 0.003 gr/dscf as BACT for the core sand storage (EU-201), the Disa Sand and Bond silos (EU-202), and the Disa New Sand Day Bin. IDEM is unaware of any more stringent limitations for similar sources, and believe that the proposed limit should satisfy the requirements for BACT.

Step 5 – Select BACT

After reviewing the RBLC database, the use of a bin vent filter was chosen as BACT to control particulate emissions from the Core Sand Storage Silo (EU-201), the Disa Sand Storage Silo and Disa Bond Storage Silo (EU-202), and the Disa New Sand Day Bin. Since the “top-down” approach (US EPA, 1990) was utilized and the most stringent emission limitation that is achievable in practice by a class or category of emission sources was selected as BACT, no further economic cost effectiveness analysis was performed.

The following emission limits have been determined to satisfy the requirement for BACT for the Disa core sand storage silo (EU-201), Disa sand storage silo and Disa bond storage silo (EU-202), and Disa New Sand Day Bin:

(a) PM emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.003 gr/dscf of exhaust air and 0.001 pound per hour.

(b) PM_{10} emissions from the bin vent filters controlling the Disa core sand storage silo (EU-201) shall not exceed 0.001 pound per hour.

(c) The bin vent filters shall be in operation and control PM and PM_{10} emissions from the core sand storage (EU-201) at all times this unit is in operation.

(d) PM emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(e) PM_{10} emissions from the Disa Sand and Bond Silos (EU-202) shall not exceed 0.04 pound per hour.

(f) PM emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.003 gr/dscf of exhaust air and 0.04 pound per hour.

(g) PM_{10} emissions from the Disa New Sand Day Bin (EU-DNS) shall not exceed 0.04 pound per hour.

BACT for CO – Disa 1 Pouring and Cooling (EU-323), Disa 1 Casting Shakeout (EU-324), Disa 1 Casting Cooling (EU-325), Disa 2 Pouring and Cooling (EU-333), Disa 2 Shakeout System (EU-334), Disa 2 Casting Cooling (EU-335)

The main source of Carbon Monoxide (CO) from the Disa plant comes from the pouring, cooling, and shakeout processes. CO emission factors for these processes are not found in the literature and there is no factor in AP-42 or WebFIRE. Recent stack test data has shown that CO emissions may be as high as 6 lbs/ton from these processes. There is also very limited data on permitted CO emission levels that have been the result of PSD BACT assessments.

The following units are covered by this BACT determination:

(a) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333A, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(b) One (1) Disa 1 casting shakeout process, identified as EU-324, constructed in 1996, controlled baghouse DC-7, exhausted to Stack DC-6/7, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(c) One (1) Disa 1 casting cooling process, identified as EU-325, constructed in 1996, controlled by baghouses DC-6 and DC-8, exhausted to Stack DC-6/7 and exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

(d) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333B, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(e) One (1) Disa 2 shakeout system, identified as EU-334, constructed in 1997, controlled baghouse DC-11, exhausted to Stack DC-11, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

(f) One (1) Disa 2 casting cooling process, identified as EU-335, constructed in 1997, controlled by baghouse DC-12, exhausted internally, nominal capacity: 6 tons of metal per hour, maximum capacity: 10 tons of metal per hour.

RMP will be constructing a new stack into which both pouring and cooling processes will feed. After completion of this project, the emission units will be identified as follows:

(a) One (1) Disa 1 pouring and cooling process, identified as EU-323, constructed in 1996, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour; and

(b) One (1) Disa 2 pouring and cooling process, identified as EU-333, constructed in 1997, controlled by in-line filters, identified as D-333, exhausted to Stack D-333C, nominal capacity: 10 tons of metal per hour and 60 tons of sand per hour.

Step 1 – Identify Control Options

Emissions of carbon monoxide (CO) are generally controlled by oxidation. Combustion control technologies include recuperative thermal oxidation, regenerative thermal oxidation, recuperative catalytic oxidation, regenerative catalytic oxidation, and flares.

Steps 2 & 3 – Eliminate Technically Infeasible Control Options and Rank Remaining Control Options by Control Effectiveness

The destruction of organic compounds usually requires temperatures ranging from 1200°F to 2200°F for direct thermal oxidizers or 600°F to 1200°F for catalytic systems. Combustion temperature depends on the chemical composition and the desired destruction efficiency. Carbon dioxide and water vapor are the typical products of complete combustion. Turbulent mixing and combustion chamber retention times of 0.5 to 1.0 seconds are needed to obtain high destruction efficiencies.

The exhaust gas from the pouring and cooling operations is at ambient temperature upon entering and leaving the baghouse that is used to control PM emissions. The thermal oxidation options are not technically feasible due to plugging of the thermal bed and the excessive fuel consumption that would be required to raise the temperature of this exhaust gas to the necessary oxidation temperature.

An economic analysis was performed to evaluate the cost effectiveness of the use of an RTO to control the pouring, cooling and shakeout processes collectively. The combined exhaust flow rate from these processes for both the Disa 1 and Disa 2 lines is approximately 200,000 acfm. The capital cost for an RTO to control emissions was based on the EPA cost control manual formulas which compute the capital cost on a December 1988 baseline. The baseline was then updated to the first quarter of 2007 using the VAPCCI index. This index is no longer supported so we have used the first quarter 2007 value as a conservative estimate.

The economic assessment shows a total capital cost of $9.25 million to install the RTO technology and an annualized cost of $4.3 million. If the RTO unit were used to control the CO emissions with a capture efficiency of 90% and control efficiency of 98%, the cost effectiveness would be $19,332 per ton of CO controlled. IDEM has determined that the use of an RTO is not cost effective and is not economically justifiable.

The modeled impact of CO emissions from the Disa lines (provided as part of modeling submitted in January, 2009 showed that the impact was approximately 1% of the 1-hour standard and 3% of the 8-hour standard and was below the "de-minimus" air quality impact levels. As such the small area impacted by RMP will be well below the health based CO standard. Any further decreases in CO emissions associated with lower emission levels would not result in any further health benefits associated with CO ambient concentrations.

The RTO unit would increase NO_x emissions by approximately 9 tons/year. NO_x emissions are precursors to the formation of Ozone and $PM_{2.5}$ and the portion emitted as the criteria pollutant NO_2 would increase ambient NO_2 levels. These emission increases associated with an RTO produce negative environmental impacts that outweigh any environmental benefit associated with the CO reductions.

Based on availability and applicability, this technology was eliminated from consideration due to technical and economic infeasibility for practical use within emission units for this industry.

Step 4 - Evaluate Control Options

Table 7 shows the results of BACT determinations for CO from pouring and cooling lines. Table 8 shows the results of BACT determinations for CO from shakeout systems.

Table 7: Comparison of CO limits for Pouring and Cooling

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 1 Pouring and Cooling process (EU-323), Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325)	CO = 6 lb/ton metal	No add-on controls
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 2 Pouring and Cooling process (EU-333), Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335)	CO = 6 lb/ton metal	No add-on controls
Thyssen Krupp Plant 1, Waupaca, WI – RBLC ID WI-0238	1/12/2006	Pouring and Cooling	CO = 5 lbs/ton metal throughput	No add-on controls
Thyssen Krupp Plant 2, Waupaca, WI – RBLC ID WI-0237	12/05/2005	Pouring and Cooling	CO = 5 lbs/ton metal throughput	No add-on controls
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0190	6/11/2002	Pouring/Mold Cooling, Disa Line 4	CO = 5 lbs/ton metal throughput and 35 lbs/hr	No add-on controls

Table 7: Comparison of CO limits for Pouring and Cooling

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0179	7/01/1998	Disa Line 2, Pouring/Mold Cooling	CO = 5 lbs/ton metal throughput and 40 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0160	12/22/1999	Pouring/Mold Cooling, Line 2	CO = 80 lbs/hr and 5 lbs/ton metal throughput	No add-on controls
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0155	12/23/1998	Pouring/Mold Cooling, Line 1	CO = 80 lbs/hr and 5 lbs/ton metal throughput	No add-on controls
Ardmore Foundry, Inc., Oklahoma City, OK – RBLC ID OK-0077	9/04/2001	Pouring and Cooling	CO = 82.34 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Pouring/Cooling, Line 6 & 8, Phase II	CO = 5 lbs/ton metal throughput and 90 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Pouring/Cooling, Line 5, Phase 2	CO = 5 lbs/ton metal throughput and 125 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Pouring/Cooling, Existing	CO = 5 lbs/ton metal throughput and 125 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Pouring/Cooling, Line 7, Phase II	CO = 5 lbs/ton metal throughput and 150 lbs/hr	No add-on controls
Ardmore Foundry, Inc., Oklahoma City, OK – RBLC ID OK-0039	5/22/2000	Pouring and Cooling	CO = 156.76 lbs/hr	No add-on controls

Table 7: Comparison of CO limits for Pouring and Cooling

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Pouring/Mold Cooling (4 lines)	CO = 365 lbs/hr with good operating practices required	No add-on controls

Table 8: Comparison of CO limits for Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 1 Pouring and Cooling process (EU-323), Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325)	CO = 6 lb/ton metal	No add-on controls
Rochester Metal Products Corp., Rochester, IN	Proposed	Disa 2 Pouring and Cooling process (EU-333), Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335)	CO = 6 lb/ton metal	No add-on controls
Thyssen Krupp Plant 1, Waupaca, WI – RBLC ID WI-0238	1/12/2006	Shakeout	CO = 1 lbs/ton metal throughput	No add-on controls
Thyssen Krupp Plants 2 and 3, Waupaca, WI – RBLC ID WI-0239	1/12/2006	Shakeout	CO = 1 lbs/ton metal throughput	No add-on controls
Thyssen Krupp Plant 2, Waupaca, WI – RBLC ID WI-0237	12/05/2005	Shakeout	CO = 1 lbs/ton metal throughput	No add-on controls
Waupaca Foundry, Plant 1, Waupaca, WI – RBLC ID WI-0179	7/01/1998	Disa Line 2 Shakeout	CO = 1 lb/ton metal throughput	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Shakeout Line 1, Existing	CO = 1 lb/ton metal throughput	No add-on controls

Table 8: Comparison of CO limits for Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Shakeout, Line 7, Phase II	CO = 1 lb/ton metal throughput and 3 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 1, Waupaca, WI – RBLC ID WI-0190	6/11/2002	Shakeout, Disa Line 4	CO = 1 lbs/ton metal throughput and 14 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0160	12/22/1999	Shakeout Line 1	CO = 16 lbs/hr and 1 lbs/ton metal throughput	No add-on controls
Waupaca Foundry, Inc. – Plant 3, Waupaca, WI – RBLC ID WI-0160	12/22/1999	Shakeout Line 2	CO = 16 lbs/hr and 1 lbs/ton metal throughput	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Shakeout, Line 6, Phase II	CO = 1 lb/ton metal throughput and 18 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Shakeout, Line 8, Phase II	CO = 1 lb/ton metal throughput and 18 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0078	2/04/1998	Shakeout, Line 5, Phase II	CO = 1 lb/ton metal throughput and 25 lbs/hr	No add-on controls
Ardmore Foundry, Inc., Oklahoma City, OK – RBLC ID OK-0077	9/04/2001	Shakeout	CO = 26.7 lbs/hr	No add-on controls
Waupaca Foundry, Inc. – Plant 5, Perry, IN – RBLC ID IN-0068	1/19/1996	Shakeout (4 lines)	CO = 73 lbs/hr with good operating practices required	No add-on controls

Table 8: Comparison of CO limits for Shakeout

Company	Date Issued	Facility Description	BACT determined	Comments
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0131	8/24/2001	Mold cooling and shakeout, Lines 1 and 2	CO = 96 lbs/hr each line and 35 tons/month each line	No add-on controls
Ravenna Casting Center, Inc., Muskegon, MI – RBLC ID MI-0274	4/14/2000	Molding, Shakeout	CO = 98.5 lbs/hr and 270 tons/yr	No add-on controls
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0131	8/24/2001	Mold cooling and shakeout, Lines 3 and 4	CO = 180 lbs/hr each line and 65.7 tons/month each line	No add-on controls
Waupaca Foundry, Inc. – Plant 6, McMinn, TN – RBLC ID TN-0063	4/29/2000	Mold Cooling and Shakeout, Cast Handling and Finishing	CO = 465 lbs/hr	No add-on controls
Aarrow Cast, Shawano, WI – RBLC ID WI-0161	10/1/1998	Pouring, cooling and shakeout	CO = 5 lbs/ton metal throughput	No add-on controls

The RBLC and review of other NSR permits reveal that similar sources use good operating practices and no add-on control technology for controlling CO emissions from pouring and cooling operations. Based on the information from the RBLC, no control technologies have been identified for control of CO resulting from pouring and cooling operations.

The most stringent CO emission limit for pouring and cooling found in the RBLC database is 5 lb/ton with use of no add-on pollution control equipment. The most stringent limit for shakeout is 1 lb/ton of metal obtained using no air pollution control equipment.

Although the permit for Aarrow Cast, in Shawano, WI includes a CO emission limit of 5 lbs/ton metal throughput for the pouring, cooling and shakeout operation, this has not been proposed as BACT for the Disa 1 Pouring and Cooling process (EU-323), Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325) or the Disa 2 Pouring and Cooling process (EU-333), Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335) because in reviewing stack test data for a number of facilities it is evident that most facilities achieve CO levels at or below 6 lbs/ton. IDEM has proposed a limit of 6 lbs/ton without controls consistent with a number of other permits and they believe that affords sufficient flexibility for ensuring compliance. IDEM does not believe a limit of 5 lbs/ton affords sufficient flexibility and does not represent a better level of control. IDEM further noted that a number of permits issued in both Indiana and Wisconsin after the Aarrow Cast permit was issued in 1998 have CO limits of 5 lbs/ton for pouring and cooling only, with several of permits having a separate CO limit for shakeout of 1 pound/ton.

Based on review of the RBLC database as well as other permit files for foundry operations, IDEM has concluded that no other foundry has installed or has been required to install specific controls to limit CO emissions from pouring, cooling and shakeout processes, although some have undergone PSD review for CO for pouring, cooling and shakeout processes. The level of control required under NSR regulations (for sources in non-attainment areas) would meet the "Lowest Achievable Emission Rate" (LAER) under the emission offset rules. LAER is defined as the:

> "most stringent rate of emissions based on the most stringent emissions limitation of the following:
>
> (1) Contained in the implementation plan of any state for the class or category of stationary source unless the owner or operator of the proposed stationary source demonstrates the limitations are not achievable;
>
> (2) Achieved in practice by the class or category of stationary sources. This limitation when applied to a modification, means the lowest achievable emission rate for the new or modified emissions unit within the stationary source. In no event shall the application of the lowest achievable emission rate allow a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance.

The assessment found that the most stringent emission limitation found in any permit or rule that IDEM was able to locate was 5 lbs/ton for pouring and cooling and 1 lb/ton for shakeout and that this limitation was not based on the use of controls. IDEM is unaware of any facility that uses any controls for CO emissions for the pouring, cooling and shakeout processes for a greensand mold casting line. The emission limit included in the permit for Aarrow Cast was excluded from consideration for these reasons. As such, IDEM concluded that LAER for CO for these processes would be a combined emission limit of 6 lbs/ton of metal poured and that no controls would be required to meet this limit. Since this would satisfy the requirement for LAER in non-attainment areas we would also conclude that it would meet the requirement for BACT in attainment areas as the standard for attainment areas should not be more stringent than the requirement in non-attainment areas.

Therefore, a limit of 6 lbs/ton is proposed for the pouring, cooling and shakeout processes combined. A combined limit is proposed since the relative amounts of CO that may be released at these three processes may vary based on factors such as cooling time and process materials used.

Step 5 – Select BACT

After reviewing the RBLC database, no controls were chosen as BACT to control CO emissions from the Disa 1 Pouring and Cooling Process (EU-323), the Disa 1 Casting Shakeout Process (EU-324), the Disa 1 Casting Cooling Process (EU-325), the Disa 2 Pouring and Cooling Process (EU-333), the Disa 2 Shakeout System (EU-334), and the Disa 2 Casting Cooling Process (EU-335). Since the "top-down" approach (US EPA, 1990) was utilized and the most stringent emission limitation that is achievable in practice by a class or category of emission sources was selected as BACT, no further economic cost effectiveness analysis was performed.

The following emission limits have been determined to satisfy the requirement for BACT for the Disa 1 Pouring and Cooling Process (EU-323), the Disa 1 Casting Shakeout Process (EU-324), the Disa 1 Casting Cooling Process (EU-325), the Disa 2 Pouring and Cooling Process (EU-333), the Disa 2 Shakeout System (EU-334), and the Disa 2 Casting Cooling Process (EU-335):

(a) Total CO emissions from the Disa 1 Pouring and Cooling process (EU-323), the Disa 1 Shakeout (EU-324), and the Disa 1 Casting Cooling Process (EU-325) combined shall not exceed 6.0 pounds per ton of metal throughput.

(b) Total CO emissions from the Disa 2 Pouring and Cooling process (EU-333), the Disa 2 Shakeout (EU-334), and the Disa 2 Casting Cooling Process (EU-335) combined shall not exceed 6.0 pounds per ton of metal throughput.

IDEM Contact

Questions regarding this proposed permit can be directed to:

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Please refer to Significant Source Modification No. SSM 049-24381-00002 and Significant Permit Modification No. SPM 049-24477-00002 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix C – Air Quality Analysis
Technical Support Document (TSD)
Prevention of Significant Deterioration (PSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Background and Description

Source Name:	Rochester Metal Products Corporation
Source Location:	616 Indiana Avenue, Rochester, Indiana 46975
County:	Fulton
SIC Code:	3321
Operation Permit No.:	T 049-5999-00002
Operation Permit Issuance Date:	December 22, 2006
Significant Source Modification No.:	049-24381-00002
Significant Permit Modification No.:	049-24477-00002
Permit Reviewer:	Kimberly Cottrell
Modeler:	Michael Mosier

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following federal Air Quality Analysis for a major modification to an existing major source which is a stationary gray and ductile iron foundry owned and operated by Rochester Metal Products Corp., located in Rochester, Indiana.

Proposed Project

Rochester Metal Products (RMP) submitted their PSD application dated February 2007 and modeling revisions dated August 2007, September 2007, February 2008, January 2009, and July 2009. RMP operates a gray and ductile iron foundry located in Rochester, Indiana.

During a Title V air operating permit review a number of issues were revisited concerning previous construction permits as they related to the applicability of PSD. Upon further review, CO emission levels from the pouring, cooling and shakeout processes exceed major modification thresholds. This triggered PSD review for the facility concerning their Disa 1 and Disa 2 lines.

ERM prepared the modeling portion of the permit application for RMP. This technical support document provides the air quality analysis review of the submitted modeling by ERM for RMP.

Analysis Summary

Based on the potential emissions after controls, a PSD air quality analysis was triggered for CO and PM_{10}. The significant impact analysis for CO and PM_{10} determined that modeling concentrations exceeded the significant impact levels for PM_{10}. A refined analysis was required and showed no violation of the NAAQS and the PSD increment. Pre-construction and post construction monitoring requirements are not necessary since nearby monitoring data was available from South Bend. An additional impact analysis was conducted and showed no significant impact. Based on the modeling results, the source will not have a significant impact upon federal air quality standards.

Air Quality Impact Objectives

The purpose of the air quality impact analysis in the permit application is to accomplish the following objectives. Each objective is individually addressed in this document in each section outlined below.

A. Establish which pollutants require an air quality analysis based on PSD significant emission rates.

B. Provide analyses of actual stack heights with respect to Good Engineering Practice (GEP), the meteorological data used, a description of the model used in the analysis, and the receptor grid utilized for the analyses.

C. Determine the significant impact level, the area impacted by the source's emissions and background air quality levels.

D. Demonstrate that the source will not cause or contribute to a violation of the National Ambient Air Quality Standard (NAAQS) or PSD increment if the applicant exceeds significant impact levels.

E. Perform a qualitative analysis of the source's impact on general growth, soils, vegetation and visibility in the impact area with emphasis on any Class I areas. The nearest Class I area is Kentucky's Mammoth Cave National Park.

F. Summarize the Air Quality Analysis.

Section A - Pollutants Analyzed for Air Quality Impact

Applicability
The PSD requirements, 326 IAC 2-2, apply in attainment and unclassifiable areas and require an air quality impact analysis of each regulated pollutant emitted in significant amounts by a major stationary source or modification. Significant emission levels for each pollutant are defined in 326 IAC 2-2-1 and in the Code of Federal Regulations (CFR) 52.21(b)(23)(i).

Proposed Project Emissions
PM_{10} and CO are the pollutants that will be emitted from RMP and are summarized below in Table 1. PM_{10} and CO potential emissions after controls exceed the PSD significant emission rates and will require an air quality analysis.

Table 1: Significant Emission Rates for PSD

Pollutant	Source Emission Rate (Facility totals in tons/year)	Significant Emission Rate (tons/year)	Preliminary Air Quality Analysis Required?
PM_{10}*	37.3	15	Yes

CO	526.0	100	Yes

*The 24 hour short term rate is 12.3 lb/hr. The annual rate is 37.3 tons per year. Both emission rates were modeled for the analysis.

These are RMP's permitted emission rates that are taken from RMP emissions calculations.

Section B – Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid and Terrain

Stack Height Compliance with Good Engineering Practice (GEP)

Applicability
Stacks should comply with GEP requirements established in 326 IAC 1-7-4. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Dispersion modeling credit for stacks taller than 65 meters (213 feet) are limited to GEP for the purpose of establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which would affect the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$Hg = H + 1.5L$$

Where: Hg is the GEP stack height
H is the structure height
L is the structure's lesser dimension (height or width)

New Stacks
Since the new stack heights for RMP are below GEP stack height, the effect of aerodynamic downwash will be accounted for in the air quality analysis for the project.

Meteorological Data
The meteorological data used by ERM in AERMOD consisted of 1986 through 1990 surface data from the South Bend National Weather Station and upper air measurements taken at Peoria, Illinois. The meteorological data was downloaded from Lakes Environmental and preprocessed using AERMET.

Model Description
ERM used AERMOD, Version 07026. OAQ used the same model version to determine maximum off-property concentrations or impacts for each pollutant. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Regulations Part 51, Appendix W "Guideline on Air Quality Models".

Receptor Grid
OAQ modeling used the same receptor grids generated by ERM. Depending on the receptor grid used the number of receptors varied between 1717 and 2397 receptors. The property line receptors and receptors close in were spaced 100 meters apart. Receptor spacing went to 500 meters apart for intermediate distances and 1000 meters apart for the outer receptors.

Treatment of Terrain
The area surrounding RMP consists of only simple terrain. Receptor terrain elevations inputted into the model were interpolated from DEM (Digital Elevation Model) data obtained from the USGS. DEM terrain data was preprocessed using AERMAP.

Section C - Significant Impact Level/Area (SIA) and Background Air Quality Levels

A significant impact analysis was conducted to determine if the source would exceed the PSD significant impact levels (concentrations). If the source's concentrations would exceed these levels, further air quality analysis is required. Modeling for PM_{10} was required because the results did exceed significant impact levels. Significant impact levels are defined by the following time periods in Table 2 below with all maximum-modeled concentrations from the worst case operating scenarios.

Table 2: Significant Impact Analysis

Pollutant	Time Averaging Period	Maximum Modeled Impacts ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Refined Air Quality Analysis Required?
CO	1 hr	420.1	2000	No
CO	8 hr	267.3	500	No
PM_{10}	Annual*	5.8	1	Yes
PM_{10}	24 hour*	23.4	5	Yes

*First highest values per EPA NSR manual October 1990.

Pre-construction Monitoring Analysis

Applicability
The PSD rule, 326 IAC 2-2-4, requires an air quality analysis of the new source or the major modification to determine if the pre-construction monitoring threshold is triggered. In most cases, monitoring data taken from a similar geographic location can satisfy this requirement if the pre-construction monitoring threshold has been exceeded. Also, post construction monitoring could be required if the air quality in that area could be adversely impacted by applicant's emissions.

Modeling Results
A comparison of the modeling results was made to the PSD preconstruction monitoring thresholds. The results are shown in the table below.

Table 3: Preconstruction Monitoring Analysis

Pollutant	Time Averaging Period	Maximum Modeled Impacts ($\mu g/m^3$)	De-minimis Level ($\mu g/m^3$)	Above De-minimis Level
CO	8hour*	267.3	575	No
PM_{10}	24 hour*	23.4	10	Yes

*****First highest values per EPA NSR manual October 1990.

PM_{10} did trigger the preconstruction monitoring. RMP can satisfy the preconstruction monitoring requirement since there is air quality monitoring data representative of the area in South Bend.

Background Concentrations

Applicability
EPA's "Ambient Monitoring Guidelines for Prevention of Significant Deterioration" (EPA-450/4-87-007) Section 2.4.1 is cited for approval of the monitoring sites for this area.

Background Monitors
Background data was taken from the closest monitoring stations to RMP. The closest PM_{10} monitoring station is located at the 2335 Shields Drive in South Bend. Using background data from monitors located in an industrialized part of South Bend represents a conservative approach since actual background values from rural Fulton County would likely be lower. It was agreed between RMP and IDEM that this approach be taken in place of the preconstruction monitoring requirement.

For all 24-hour background concentrations, the averaged second highest monitoring values were used. Annual background concentrations were taken from the maximum annual values.

Table 4: Existing Monitoring Data Used For Background Concentrations *

Pollutant	Monitoring Site	Averaging Period	Concentration ($\mu g/m^3$)
PM_{10}	18-141-0015	Annual	21.4
PM_{10}	18-141-0015	24 hour	39

*OAQ used the most conservative values for the air quality analysis. It is standard policy to use the latest 3 years of data.

Section D - NAAQS and PSD Increment

NAAQS Compliance Analysis and Results
OAQ supplied emission inventories of all point sources within a 50-kilometer radius of RMP. The NAAQS inventories are generated from I-STEPS (State Emission Processing System) in accordance with 326 IAC 2-6. The PSD increment inventories include sources that affect the increment and are compiled from permits issued by IDEM.

NAAQS modeling for the appropriate time-averaging periods for PM_{10} was conducted and compared to the respective NAAQs limit. OAQ modeling results are shown in Table 5. All maximum-modeled concentrations were compared to the respective NAAQS limit. All maximum-modeled concentrations during the five years were below the NAAQS limits and further modeling was not required.

Table 5: NAAQS Analysis

Pollutant	Year	Time-Averaging Period	Maximum Concentration $\mu g/m^3$	Background Concentration $\mu g/m^3$	Total $\mu g/m^3$	NAAQS Limit $\mu g/m^3$	NAAQS Violation
PM_{10}	1990	Annual[1]	14.6	21.4	36	50	NO
PM_{10}	1992	24 hour H2H[2]	96.5	39	135.5	150	NO

[1] First highest values per EPA NSR manual October 1990. Any small discrepancies between the NAAQS and increment numbers are due to slightly different source inventories used for the NAAQS and the increment modeling.
[2] High 2nd high value per EPA NSR manual October 1990.

Analysis and Results of Source Impact on the PSD Increment

Applicability
Maximum allowable increases (PSD increments) are established by 326 IAC 2-2 for PM_{10}. This rule also limits a source to no more than 80 percent of the available PSD increment to allow for future growth.

Source Impact
Since the impact for PM_{10} from Rochester Metal Products modeled above significant impact levels, a PSD increment analysis for the existing major sources and its surrounding counties was required. Results of the increment modeling are summarized in Table 6 below.

Table 6: Increment Analysis

Pollutant	Year	Time-Averaging Period	Maximum Concentration $\mu g/m^3$	PSD Increment $\mu g/m^3$	Percent Impact on the PSD Increment	Increment Violation
PM_{10}	1990	Annual[1]	4.1	17	24.1%	NO
PM_{10}	1990	24 hour H2H[2]	23.4	30	78%	NO

[1] First highest value per EPA NSR manual October 1990. Any small discrepancies between NAAQS and increment numbers are due to slightly different source inventories used for the NAAQS and the increment modeling
[2] Highest second high per EPA NSR manual October 1990.

The results of the increment analysis shows all pollutants for all averaging periods were below 80% of the available increment. No further analysis is required.

Part E – Qualitative Analysis

Additional Impact Analysis
All PSD permit applicants must prepare additional impacts analysis for each pollutant subject to regulation under the Act. This analysis assesses the impacts on growth, soils and vegetation, endangered species and visibility caused by any increase in emissions of any regulated pollutant from the source. The RMP modeling submittal provided an additional impact analysis performed by ERM.

Economic Growth
The purpose of the growth analysis is to quantify project associated growth and estimate the air quality impacts from this growth either quantitatively or qualitatively. Since the foundry is an existing source and there are no modifications proposed at this time, there will be no construction impacts. Commercial growth is anticipated to occur at a gradual rate in the future.

Soils and Vegetation Analysis
A list of soil types present in the general area was determined. Soil types include the following: Loamy Glacial Till, Moderate thick Loess over Loamy Glacial Till and Thin Loess over Loamy Glacial Till.

Due to the agricultural nature of the land, crops in the Fulton County area consist mainly of corn, wheat, and soybeans (2002 Agricultural Census for Fulton County). The maximum modeled concentrations for RMP are well below the threshold limits necessary to have adverse impacts on the surrounding vegetation such as autumn bent, nimblewill, barnyard grass, bishopscap and horsetail, and milkweed (Flora of Indiana – Charles Deam). Livestock in Fulton County consist mainly of hogs, cattle, and sheep (2002 Agricultural Census for Fulton County) and will not be adversely impacted from the facility. Trees in the area are mainly hardwoods. These are hardy trees and no significant adverse impacts are expected due to modeled concentrations.

Federal and State Endangered Species Analysis
Federal and state endangered or threatened species are listed by the U.S. Fish and Wildlife Service; Division of Endangered Species for Indiana. Of the federal and state endangered or threatened species on the list, 17 mollusks, 8 fish, 2 amphibians, 3 reptiles, 10 birds, and 5 mammals have habitat within Fulton County. The mollusks and fish are found in rivers and lakes while the other species of bird and mammals are found in forested areas. The facility is not expected to have any additional adverse effects on the habitats of the species than what has already occurred from the industrial, farming, and residential activities in the area.

Federal and state endangered or threatened plants are listed by the U.S. Fish and Wildlife Service, Division of Endangered Species for Indiana. They list 11 state endangered or threatened species of plants. The endangered plants do not thrive in industrialized and residential areas. The facility is not expected to adversely affect any plant on the endangered species list.

Visibility Analysis
The VISCREEN model is designed as a screening model to determine the visual impact parameters from a single source plume. It is used basically to determine whether or not a plume is visible as an object itself. The visibility impairment analysis considers the impacts that occur within the impact area of the source as defined by the user distances. The user distances are determined by the nearest interstate or airport. EPA has defined these locations in guidance to the state.

The PM_{10} emissions limits were used to run a local visibility Level 1 analysis. VISCREEN Version 1.01 was used to determine if the color difference parameter (Delta-E) or the plume (green) contrast limits were exceeded. The Delta-E was developed to specify the perceived magnitude of color and brightness changes and is used as the primary basis for determining the perceptibility of plume visual impacts. The plume constant can be defined at any wavelength as the relative difference in the intensity (called spectral radiance) between the viewed object and its background. This is used to determine how the human eye responds differently to different wavelengths of light. The Delta-E of 2.0 and the plume contrast of 0.05 were not exceeded at the nearest interstate location along I-69 or at the Rochester Municipal Airport.

Potential visibility impacts to Mammoth Cave National Park more than 100 km from RMP would be insignificant. This is due to the distance from the Class 1 area and magnitude and characteristics of emission sources at RMP.

Additional Analysis Conclusions
Finally, the results of the additional impact analysis conclude the operation of the facility will have no significant impact on economic growth, soils, vegetation or visibility in the immediate vicinity or on any Class I area.

Part H - Summary of Air Quality Analysis

ERM prepared the modeling portion of the PSD application. Fulton County is designated as attainment for all criteria pollutants. PM_{10}, and CO emission rates associated with the proposed facility exceeded the respective significant emission rates. Modeling results taken from the AERMOD model showed PM_{10} impacts were predicted to be greater than the significant impact levels. RMP did trigger preconstruction monitoring for PM_{10} but can satisfy the preconstruction monitoring requirement since there is existing air quality monitoring data representative of the area. The NAAQS and increment modeling for PM_{10} showed no violations of the standards. The nearest Class I area is Mammoth Cave National Park in Kentucky over 100 kilometers away from the source. An additional impact analysis was required and the operation of the proposed facility will have no significant impact.

Emission Limitations

The following limits shall apply pursuant to 326 IAC 2-2-4 as a result of the air dispersion modeling analysis performed:

(a) PM_{10} emissions from baghouse DC-3, exhausting internally and controlling emissions from the Hunter sand storage silo (EU-203) the Hunter sand system (EU-311), shall not 1.0 pound per hour.

(b) PM_{10} emissions from baghouse DC-4, exhausting through stack DC-4 and controlling emissions from the Hunter sand system (EU-311) and the Hunter shakeout (EU-314), shall not 1.0 pound per hour.

(c) PM_{10} emissions from each of the Stacks HP1, HP2, HP3 and HP4 associated with the Hunter pouring cooling process (EU-313) shall not 1.4 pound per hour.

(d) Total PM_{10} emissions from baghouses DC-6 and DC-7 exhausting through stack DC-6/7 and controlling emissions from the Disa 1 Shakeout (EU-324), Disa 1/Disa 2 sand systems (EU-321), and Disa 1 Casting Cooling (EU-325) shall not exceed 4.6 pound per hour.

(e) PM_{10} emissions from the baghouse DC-9, exhausting through stack DC-9 and controlling emissions from the two (2) natural gas-fired preheaters (No. 1 and No. 2), the charge handling system (EU-118), and the two (2) electric induction furnaces 4 and 5 (EU-114 and EU-115), shall not exceed 1.0 pound per hour.

(f) PM_{10} emissions from the baghouse DC-11, exhausting through stack DC-11 and controlling emissions from the Disa 2 Sand Muller (EU-331) and the Disa 2 Shakeout (EU-334), shall not exceed 1.0 pounds per hour.

(g) PM_{10} emissions from the baghouse DC-13, exhausting through stack DC-13 and controlling emissions from the Hunter Induction Furnace 1 (EU-131), the Hunter Induction Furnace 2 (EU-132), and the Hunter Induction Furnace 3 (EU-133), shall not exceed 0.7 pound per hour.

(h) PM_{10} emissions from the Disa 1 Pouring and Cooling process (EU-323) shall not exceed 2.5 pound per hour.

(i) PM_{10} emissions from the Disa 2 Pouring and Cooling process (EU-333) shall not exceed 2.5 pound per hour.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No. SSM 049-24381-00002 and Significant Permit Modification No. SPM 049-24477-00002 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix D – Economic Analysis for CO BACT
Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name:	Rochester Metal Products Corporation
Address City IN Zip:	616 Indiana Avenue, Rochester, IN 46975
County:	Fulton
SIC Code:	3321
Source Modification:	SSM 049-24381-00002
Permit Modification:	SPM 049-24477-00002
Permit Reviewer:	Kimberly Cottrell
Date:	April 9, 2009

Cost Analysis for Addition of RTO to Control CO Emissions from Disa 1 and Disa 2 Casting Lines

Cost Item	Average Cost Factor		Cost ($s)	Basis of Costs
Direct Costs:				
200,000 cfm RTO to control CO emissions from pouring, cooling and shakeout from Disa 1 and Disa 2 casting Lines			**$ 8,401,212**	**EPA Cost manual**
Taxes	0.05		$ 420,061	EPA Cost Manual Table 2.8
Freight	0.05		$ 420,061	EPA Cost Manual Table 2.8
Base Price:			**$ 9,241,333**	
Installation costs, direct:				
Foundations/Supports	0.08		$ -	Included in Direct Costs
Erection/handling	0.14		$ -	
Electrical	0.04		$ -	
Piping	0.02		$ -	
Insulation	0.01		$ -	
Painting	0.01		$ -	
Total Installation Costs:			**$ -**	
TOTAL DIRECT COSTS (Base Price + Installation)=			**$ 9,241,333**	
Installation costs, indirect:				
Engineering/supervision	0.10			Included in Direct Costs
Construction/field expenses	0.05			
Construction fee	0.10			
Start-up	0.02			
Performance Test	0.01		$ 5,000	Engineering Estimate to test stacks
Contingencies	0.03			Included in Quote
TOTAL INDIRECT COSTS=			**$ 5,000**	
TOTAL CAPITAL COSTS (Direct + Indirect)=			**$ 9,246,333**	
Direct Operating Costs:		**hours/year**		
Operator ($/HR X HRS/YR)	13.58	2190	$ 29,740	EPA guidance - 2 hour per shift per device. Facilty specific hourly rates
Supervision(15% of labor)			$ 4,461	EPA Cost Manual
Operating Materials:				
Maintenance Labor	20.41	1095	$ 22,349	EPA Guidance (1 hour/shift/device) Facility specific Hourly rates
Maitenance Materials (100% of labor)			$ 22,349	
Replacement parts (as required)	5% of equipment costs		$ 420,061	
Utilities:				
Electricity	0.0614	$/KW	$ 378,118	Based on 2008 average value
	703	KW		
Gas	$9.36	$/MMBtu	$ 1,655,422	Based on 2008 average value
	20.19	MMBtu/hr		
TOTAL DIRECT OPERATING COSTS (A)=			**$ 2,532,500**	
Indirect operating (fixed) costs:				
Overhead	60% of O & M labor/materials		$ 47,339	EPA Cost Manual
Property Tax	1% of capital costs		$ 92,463	
Insurance	1% of capital costs		$ 92,463	
Administration	2% of capital costs		$ 184,927	
Capital Recovery CRF=	0.14569	(7.5% for 10 years)	$ 1,347,098	
TOTAL FIXED COSTS (B)=			**$ 1,764,291**	
TOTAL ANNUALIZED COSTS (A +B)=			**$ 4,296,791**	
Uncontrolled Emissions Rate (tons/year) based on 6 lbs CO/ton of metal poured and 84,000 tons/year metal poured limit.			**252.00**	
Control System Efficiency based on 90 capture and 98% control			88.2%	
Controlled Emissions Rate (tons/year)=			29.74	
CO Controlled, tons/year			222.26	
Cost ($/ton)=			**$19,332**	

"EPA Air Pollution Control Cost Manual, Sixth Edition", EPA-452-02-001, January 2002.

Indiana County Endangered, Threatened and Rare Species List

County: Fulton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Alasmidonta viridis	Slippershell Mussel			G4G5	S2
Epioblasma torulosa rangiana	Northern Riffleshell	LE	SE	G2T2	S1
Fusconaia subrotunda	Longsolid		SE	G3	S1
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G4	S2
Lampsilis ovata	Pocketbook			G5	S2
Ligumia recta	Black Sandshell			G5	S2
Obovaria subrotunda	Round Hickorynut		SSC	G4	S2
Plethobasus cyphyus	Sheepnose	C	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G2	S1
Pleurobema plenum	Rough Pigtoe	LE	SE	G1	S1
Pleurobema pyramidatum	Pyramid Pigtoe		SE	G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot		SE	G3T3	S1
Simpsonaias ambigua	Salamander Mussel		SSC	G3	S2
Toxolasma lividus	Purple Lilliput		SSC	G2	S2
Villosa fabalis	Rayed Bean	C	SSC	G1G2	S1
Villosa lienosa	Little Spectaclecase		SSC	G5	S2
Fish					
Ammocrypta pellucida	Eastern Sand Darter			G3	S2
Coregonus artedi	Cisco		SSC	G5	S2
Etheostoma camurum	Bluebreast Darter			G4	S1
Etheostoma maculatum	Spotted Darter		SSC	G2	S1
Etheostoma tippecanoe	Tippecanoe Darter		SSC	G3G4	S1
Hybopsis amblops	Bigeye Chub			G5	S2
Ichthyomyzon bdellium	Ohio Lamprey			G3G4	S2
Percina evides	Gilt Darter		SE	G4	S1
Amphibian					
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Rana pipiens	Northern Leopard Frog		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle		SE	G5	S2
Emydoidea blandingii	Blanding's Turtle		SE	G4	S2
Sistrurus catenatus catenatus	Eastern Massasauga	C	SE	G3G4T3T4	S2
Bird					
Ardea herodias	Great Blue Heron			G5	S4B
Botaurus lentiginosus	American Bittern		SE	G4	S2B
Buteo platypterus	Broad-winged Hawk	No Status	SSC	G5	S3B
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Gallinula chloropus	Common Moorhen	No Status	SE	G5	S3B
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Rallus limicola	Virginia Rail		SE	G5	S3B
Sterna forsteri	Forster's Tern			G5	SHB
Tyto alba	Barn Owl		SE	G5	S2
Mammal					
Condylura cristata	Star-nosed Mole		SSC	G5	S2?
Lynx rufus	Bobcat	No Status		G5	S1
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1
Spermophilus franklinii	Franklin's Ground Squirrel		SE	G5	S2
Taxidea taxus	American Badger			G5	S2
Vascular Plant					
Bidens beckii	Beck Water-marigold		ST	G4G5T4	S1
Carex atlantica ssp. capillacea	Howe Sedge		SE	G5T5?	S1
Carex bebbii	Bebb's Sedge		ST	G5	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Fulton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Carex pseudocyperus	Cyperus-like Sedge		SE	G5	S1
Carex sparganioides var. cephaloidea	Thinleaf Sedge		SE	G5	S2
Cirsium hillii	Hill's Thistle		SE	G3	S1
Crataegus succulenta	Fleshy Hawthorn		SR	G5	S2
Eriophorum viridicarinatum	Green-keeled Cotton-grass		SR	G5	S2
Geranium bicknellii	Bicknell Northern Crane's-bill		SE	G5	S1
Lathyrus venosus	Smooth Veiny Pea		ST	G5	S2
Stenanthium gramineum	Eastern Featherbells		ST	G4G5	S1
High Quality Natural Community					
Forest - upland mesic	Mesic Upland Forest		SG	G3?	S3
Savanna - sand dry	Dry Sand Savanna		SG	G2?	S2
Savanna - sand dry-mesic	Dry-mesic Sand Savanna		SG	G2?	S2S3
Wetland - fen	Fen		SG	G3	S3
Wetland - marsh	Marsh		SG	GU	S4

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Andrew Murdock
Rochester Metal Products Corp
616 Indiana Ave.
Rochester IN 46975

DATE: Feb. 1, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Significant Source Modification
049-24381-00002

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Greg Loving Sr. Vice President Rochester Metal Products Corp
Erin Surinak ERM
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
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Feb. 1, 2010

TO: Fulton County Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Rochester Metal Products Corp
Permit Number: 049-24381-00002

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	BMILLER 2/1/2010 Rochester Metal Products Corp. 049-24381-00002 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Andrew Murdock Rochester Metal Products Corp. 616 Indiana Avenue Rochester IN 46975 (Source CAATS) ***Via Confirmed Delivery***									
2		Greg Loving Senior Vice President & General Manager Rochester Metal Products Corp. 616 Indiana Avenue Rochester IN 46975 *(RO CAATS)*									
3		Fulton County Commissioners 1093 E 600 N Rochester IN 46975 *(Local Official)*									
4		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 *(Affected Party)*									
5		Fulton Co Public Library 320 W 7th St Rochester IN 46975-1332 *(Library)*									
6		Fulton County Health Department 125 E 9th Street #125 Rochester IN 46975-7119 *(Health Department)*									
7		Rochester City Council and Mayors Office 320 Main St Rochester IN 46975 *(Local Official)*									
8		Erin Surinak Environmental Resources Management (ERM) 11350 N Meridian Street Suite 220 Indianapolis IN 46032 *(Consultant)*									
9											
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