



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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TO: Interested Parties / Applicant
DATE: September 26, 2007
RE: Manchester Metals, LLC / 169-23344-00019
FROM: Nisha Sizemore
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, 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 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) 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, Room 1049, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.



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Part 70 Operating Permit Renewal OFFICE OF AIR QUALITY

**Manchester Metals, LLC
205 Wabash Road
North Manchester, Indiana 46962**

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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 also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T 169-23344-00019	
Issued by: <i>Original signed by</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: September 26, 2007 Expiration Date: September 26, 2012

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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 iron and steel foundry source.

Source Address:	205 Wabash Road, North Manchester, Indiana 46962
Mailing Address:	P.O. Box 345, North Manchester, Indiana 46962
General Source Phone Number:	(260)982-2191
SIC Code:	3321
County Location:	Wabash
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Minor 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:

- (a) One (1) scrap handling process, constructed in 1968, including one (1) bridge crane and one (1) scale, identified as process SI, exhausting inside, maximum capacity: 10 tons of metal per hour.
- (b) One (1) melting and casting process consisting of the following emission units and pollution control devices:
 - (1) One (1) 1.16 million British thermal unit per hour natural gas-fired scrap charge preheater, constructed in 1970, identified as CP, exhausting inside the building, with some emissions controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1.
 - (2) Three (3) electric induction (scrap iron) furnaces, constructed in 1973 and modified in 1995, identified as IF1, IF2, and IF3, exhausting inside the building, with some emissions voluntarily controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, maximum charge rate: 3.6 tons per hour, each, and 6.5 tons of iron per hour, total.
 - (3) One (1) electric induction (stainless steel) furnace, constructed in 1966, identified as IF4, maximum charge rate: 1.0 ton per hour.
 - (4) Four (4) natural gas-fired ladle heaters, constructed in 1970, identified as LH1, LH2, LH3, and LH4, combined maximum capacity: 2.6 million British thermal units per hour, total.
 - (5) One (1) molding, pouring and cooling line, identified as the disamatic molding/pouring line, constructed in 1993, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 30

tons of molding sand and 5 tons of metal per hour.

- (6) One (1) molding, pouring and cooling line, identified as the disaforma molding/pouring line, constructed in 1986, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 60 tons of molding sand and 10 tons of metal per hour.
- (7) One (1) molding, pouring and cooling line, identified as the pallet line and floor stations, constructed prior to 1973, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 6 tons of molding sand and 1 ton of metal per hour.
- (c) One (1) shakeout operation, constructed in 1973, identified as operation CCS, with emissions controlled by baghouse DC2 and exhausting through stack S2, maximum capacity: 80 tons of sand and 10 tons of metal per hour.
- (d) One (1) cleaning and finishing process consisting of the following emission units and pollution control devices:
 - (1) One (1) casting cleaner shotblaster, constructed in 1968, identified as CCL1, with emissions controlled by baghouse DC4 and exhausting through stack S4, maximum capacity: 1.0 ton of castings per hour.
 - (2) One (1) casting cleaner shotblaster, constructed in 1968, identified as CCL2, with emissions controlled by baghouse DC6 and exhausting through stack R5, maximum capacity: 3.0 tons of castings per hour.
 - (3) One (1) shot blast cleaner, constructed in 1974, identified as CCL3, with PM and PM₁₀ emissions controlled by baghouse DC7 and exhausting through stack S10, maximum capacity: 2.5 tons of castings per hour.
 - (4) Seven (7) pedestal wheel grinders, with six (6) constructed in 1993 and one (1) constructed in 1994, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, with PM and PM₁₀ emissions from all of the grinders controlled by baghouse DC6 and exhausting through stack R5, maximum throughput: 0.25 ton of castings per hour, each.
 - (5) Two (2) dual wheel grinders, constructed in 1993, identified as GR3 and GR4, with emissions from both grinders controlled by baghouse DC6 and exhausting through stack R5, maximum throughput: 0.5 ton of castings per hour, each.
 - (6) One (1) 3.2 million British thermal unit per hour natural gas-fired annealing oven, constructed in 1967, identified as HT1, exhausting through stack S9, maximum capacity: 1.5 tons of iron per hour.
- (e) Sand handling, core making and molding making processes consisting of the following emission units and pollution control devices:
 - (1) The following mold making processes:
 - (A) One (1) mold sand handling system, constructed in 1965, identified as MSH, with a maximum capacity of 100 tons of sand per hour, consisting of the following:
 - (i) One (1) muller, constructed in 1987, with emissions controlled by baghouse DC3 and exhausting through stack S6 or returned inside through stack S6R;

- (ii) Three (3) storage silos, constructed in 1960; and
 - (iii) Conveyors with emissions controlled by baghouse DC3 and exhausting through stack S6 or returned inside through stack S6R.
 - (B) Two (2) mold making lines, identified as DM1, one constructed in 1986 with a maximum capacity of 60 tons of sand per hour and one constructed in 1993 with a maximum capacity of 30 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (C) One (1) pallet molding operation, constructed in 1965, maximum capacity: 5 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
- (2) The following North isocure core making processes:
 - (A) One (1) core sand handling system, constructed in 1970, identified as CSH-North, with a maximum capacity of 10 tons of sand per hour, consisting of the following:
 - (i) One (1) storage silo, equipped with a bin vent filter; and
 - (ii) Two (2) surge hoppers, equipped with an after filter.
 - (B) One (1) isocure core making operation, identified as ICM-1, with catalyst emissions controlled by a fume scrubber, exhausting through stack S8, including the following:
 - (i) Two (2) isocure core machines, constructed in 1980, identified as ICM-1a and ICM-1b, maximum capacity: 1.0 ton of sand per hour, 30 pounds of resin per hour, and 3 pounds of catalyst (Dimethylethylamine) per hour, each.
 - (ii) One (1) isocure core machine, constructed in 2005, identified as ICM-1c, maximum capacity: 0.75 tons of sand per hour, 22.5 pounds of isocure per hour, and 2.25 pounds of catalyst (Dimethylethylamine) per hour.
- (3) The following South isocure core making processes:
 - (A) One (1) core sand handling system, constructed in 2006, identified as CSH-South, with a maximum capacity of 1.5 tons of sand per hour, consisting of the following:
 - (i) One (1) storage silo, constructed in 2007, equipped with a bin vent filter; and
 - (ii) One (1) surge hopper.
 - (B) One (1) isocure core machine, constructed in 2006, identified as ICM-L20, with catalyst emissions controlled by a fume scrubber, exhausting to stack LA-1, maximum capacity: 1.5 tons of sand per hour, 45 pounds of resin per hour, and 4.5 pounds of non-HAP catalyst per hour.

- (4) The following shell core making processes:
 - (A) One (1) bucket elevator for shell core sand, identified as SSH-North, constructed in 1981, equipped with a filter, maximum capacity: 2.0 tons of sand per hour.
 - (B) Ten (10) shell core making machines, seven (7) constructed in 1981 and three (3) constructed in 2005, identified as SCM, maximum capacity: 2.0 tons of pre-mixed sand per hour, each and total.
- (5) One (1) air set core machine, constructed in 1997, identified as ACM, maximum capacity: 1.5 tons of sand, 3.91 pounds of alphaset and 1.30 pounds of alphacure per hour.
- (6) One (1) 0.5 million British thermal unit per hour (MMBtu/hr) natural gas-fired core baking oven, constructed in 1970, identified as CM Oven, exhausting through two (2) stacks, identified as S7A and S7B.
- (f) Inoculation operations, operating since approximately 1973, exhausting inside the building, with some emissions voluntarily controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, maximum capacity: 10 tons of metal 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) Degreasing operations that do not exceed 145 gallons per 12 month period, except if subject to 326 IAC 20-6, including one (1) parts washer, constructed in 1987, equipped with a lid. There are no HAPs or halogenated solvents used in the degreasing operations. [326 IAC 8-3-2]
- (b) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

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) This permit, T 169-23344-00019, 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) The "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. All 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 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 maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (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 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 Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

- (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 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) In addition to the nonapplicability determinations set forth in Sections D of this permit, the IDEM, OAQ has made the following determinations regarding this source:

The requirement from F 169-6298-00019, issued on June 25, 1997, Condition C.1, listing requirements pursuant to 326 IAC 2-8, is not applicable because this source has requested a Title V, Part 70, Operating Permit. Therefore, the source is subject to 326 IAC 2-7, Part 70, and the 326 IAC 2-8, FESOP, limits are not required.

- (c) 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.
- (d) 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.
- (e) 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.
- (f) 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).
- (g) 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)]

- (h) 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 169-23344-00019 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 Data Section, 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 non-compliance 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 Branch, 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] [40 CFR 72]

- (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 Branch, 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 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, 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] [326 IAC 2-2-2] [326 IAC 2-3-2]

- (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 2-2-2 and/or 326 IAC 2-3-2.

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 Branch, 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 perform-

ance 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 one hundred (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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4. 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited 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 Data Section, 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 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 prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on May 23, 2005.
- (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;
 - (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) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year 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 "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) affecting an existing emissions other than at a source with Plant-wide 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)) 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 the 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(II)) 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.
- (2) 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
 - (3) 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 Data Section, 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) 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 record keeping provisions of (c) 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(II)) 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 (c)(2) and (3) 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
Air Compliance Section, 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 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Scrap Handling

- (a) One (1) scrap handling process, constructed in 1968, including one (1) bridge crane and one (1) scale, identified as process SI, exhausting inside, maximum capacity: 10 tons of metal per hour.

(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 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 scrap handling process shall not exceed 19.2 pounds per hour, when operating at a process weight rate of 10 tons of metal per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

D.1.2 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 this facility.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Melting, Casting and Shakeout

- (b) One (1) melting and casting process consisting of the following emission units and pollution control devices:
- (1) One (1) 1.16 million British thermal unit per hour natural gas-fired scrap charge preheater, constructed in 1970, identified as CP, exhausting inside the building, with some emissions controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1.
 - (2) Three (3) electric induction (scrap iron) furnaces, constructed in 1973 and modified in 1995, identified as IF1, IF2, and IF3, exhausting inside the building, with some emissions voluntarily controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, maximum charge rate: 3.6 tons per hour, each, and 6.5 tons of iron per hour, total.
 - (3) One (1) electric induction (stainless steel) furnace, constructed in 1966, identified as IF4, maximum charge rate: 1.0 ton per hour.
 - (4) Four (4) natural gas-fired ladle heaters, constructed in 1970, identified as LH1, LH2, LH3, and LH4, combined maximum capacity: 2.6 million British thermal units per hour, total.
 - (5) One (1) molding, pouring and cooling line, identified as the disamatic molding/pouring line, constructed in 1993, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 30 tons of molding sand and 5 tons of metal per hour.
 - (6) One (1) molding, pouring and cooling line, identified as the disaforma molding/pouring line, constructed in 1986, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 60 tons of molding sand and 10 tons of metal per hour.
 - (7) One (1) molding, pouring and cooling line, identified as the pallet line and floor stations, constructed prior to 1973, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 6 tons of molding sand and 1 ton of metal per hour.
- (c) One (1) shakeout operation, constructed in 1973, identified as operation CCS, with emissions controlled by baghouse DC2 and exhausting through stack S2, maximum capacity: 80 tons of sand and 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.2.1 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the three (3) electric induction furnaces for melting iron (IF1 through IF3) shall not exceed 9.67 pounds per hour, each, when operating at a process weight rate of 3.6 tons of metal per hour, each.

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the molding, pouring and cooling operations at the one (1) disamatic molding/pouring line shall not exceed 41.3 pounds per hour, when operating at a process weight rate of 35 tons of sand and metal per hour.
- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the molding, pouring and cooling operations at the one (1) disaforma molding/pouring line shall not exceed 47.8 pounds per hour, when operating at a process weight rate of 70 tons of sand and metal per hour.
- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the molding, pouring and cooling operations at the one (1) pallet line and floor stations shall not exceed 15.1 pounds per hour, when operating at a process weight rate of 7.0 tons of sand and metal per hour.
- (e) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the shakeout operation (CCS) exhausting to baghouse DC2 shall not exceed 50.2 pounds per hour, when operating at a process weight rate of 90 tons of sand and metal per hour.

The pounds per hour limitations were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

or

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

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

D.2.2 PSD Minor Limit [326 IAC 2-2]

- (a) The Permittee shall comply with the following limitations for the one (1) disaforma molding/pouring line:
 - (1) Pursuant to T 169-9014-00019, issued on May 14, 2002, the throughput of metal at the pouring and cooling operations at the one (1) disaforma molding/pouring line shall be less than 11,826 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) Pursuant to T 169-9014-00019, issued on May 14, 2002, and as revised by this permit, the total PM emission rate from the pouring and cooling operations shall not exceed 4.2 pounds per ton of metal throughput, and the total PM₁₀ emission rate from the pouring and cooling operations shall not exceed 2.53 pounds per ton of metal throughput.
 - (3) Pursuant to this permit, the CO emission rate from the pouring and cooling operations shall not exceed 6.0 pounds per ton of metal throughput.

These limitations limit the potential to emit of PM, PM₁₀, and CO from the combination of this facility and the one (1) mold making line, also constructed in 1986, to less than twenty-five

(25) tons per year, fifteen (15) tons per year, and one hundred (100) tons per year, respectively. Therefore, these limitations rendered the 1986 modification a minor modification, and the requirements of 326 IAC 2-2, PSD, are not applicable.

- (b) The Permittee shall comply with the following limitations for the one (1) disamatic molding/pouring line:
- (1) Pursuant to this permit, the throughput of metal at the pouring and cooling operations at the one (1) disamatic molding/pouring line shall be less than 4,613 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) Pursuant to T 169-9014-00019, issued on May 14, 2002, and revised by this permit, the PM emission rate from the pouring operation shall not exceed 4.2 pounds per ton of metal throughput and the PM₁₀ emission rate shall not exceed 2.06 pounds per ton of metal throughput.
 - (3) Pursuant to T 169-9014-00019, issued on May 14, 2002, and revised by this permit, the PM and PM₁₀ emission rates from the cooling operation shall not exceed 1.4 pounds per ton of metal throughput.
 - (4) Pursuant to this permit, the CO emission rate from the pouring and cooling operations shall not exceed 6.0 pounds per ton of metal throughput

These limitations, in combination with Condition D.3.2, shall limit the potential to emit PM, PM₁₀ and CO from the total of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, one (1) disamatic molding/pouring line, and the one (1) mold making line, identified as part of DM1, all considered part of the same modification, to less than twenty-five (25) tons per year, fifteen (15) tons per year, and one hundred (100) tons per year, respectively. Therefore, these limitations rendered the 1993/1994 modification a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, are not applicable.

- (c) The Permittee shall comply with the following limitations for the four (4) electric induction furnaces, IF1 through IF4:
- (1) Pursuant to T 169-9014-00019, issued on May 14, 2002, the iron throughput to the total of the four (4) electric induction furnaces, IF1 through IF4, shall be less than 34,700 tons per consecutive twelve (12) month period, with compliance determined at the end of each month. Each ton of steel melted shall be considered equivalent to one tenth (0.1) ton of iron throughput.
 - (2) The PM emissions shall not exceed 0.9 pound per ton when melting iron and 0.1 pound per ton when melting steel, and the PM₁₀ emissions shall not exceed 0.86 pound per ton when melting iron and 0.09 pound per ton when melting steel.

These limitations shall limit the potential to emit PM to less than twenty-five (25) tons per year, and the potential to emit PM₁₀ to less than fifteen (15) tons per year, from the total of the four (4) furnaces, IF1 through IF4, rendering the 1995 modification a minor modification to an existing major source, pursuant to 326 IAC 2-2, PSD.

D.2.3 Emission Factor Limit

The total organic HAPs emissions shall be less than 0.016 pounds per pound of index material from pouring, cooling and shakeout using shell core sand.

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 four (4) electric induction furnaces, identified as IF1 through IF4, three (3) molding, pouring and cooling lines, and one (1) shakeout operation, identified as CCS, and the control device for the shakeout operation.

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

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 180 days after issuance of this Part 70 permit renewal, in order to demonstrate compliance with Condition D.2.1(c) and D.2.2(a)(2), the Permittee shall perform PM and PM₁₀ testing for the pouring and cooling operations at the one (1) disaforma molding/pouring line, utilizing methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 180 days after issuance of this Part 70 permit renewal, in order to demonstrate compliance with the alternate emission factor in Condition D.2.3, the Permittee shall perform total organic HAPs testing for the pouring, cooling and shakeout operations using shell core sand, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

D.2.6 Particulate Control [326 IAC 2-7-6(6)]

- (a) In order to demonstrate compliance with Condition D.2.1(e), the baghouse (DC2) shall be in operation and control emissions from the shakeout process (CCS) at all times when the shakeout 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.

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

D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the three (3) electric induction furnaces, identified as IF1 through IF3, three (3) molding, pouring and cooling lines, and one (1) shakeout operation, identified as CCS, stack exhausts (general ventilation and stack S2) shall be performed 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.2.8 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 (DC2) used in conjunction with the shakeout process (CCS), at least once per day when the shakeout process is in operation when venting to the atmosphere. When, for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 5.0 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.2.9 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 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, or dust traces.

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

D.2.10 Record Keeping Requirements

- (a) To document compliance with Condition D.2.7, the Permittee shall maintain records of visible emission notations of the three (3) electric induction furnaces, identified as IF1 through IF3, three (3) molding, pouring and cooling lines, and one (1) shakeout operation, identified as CCS, stack exhausts 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 furnaces did not operate that day).
- (b) To document compliance with Condition D.2.8, the Permittee shall maintain records once per day of the pressure drop across the baghouse (DC2) used in conjunction with the shakeout process (CCS). 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 shakeout did not operate that day).
- (c) To document compliance with Condition D.2.2, the Permittee shall maintain monthly records of the:

- (1) throughput of metal at the one (1) disaforma molding/pouring line;
 - (2) throughput of metal at the one (1) disamatic molding/pouring line; and
 - (3) total iron and steel throughput at the four (4) electric induction furnaces, IF1 through IF4.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.2(a)(1), (b)(1) and (c)(1) 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)]: Cleaning and Finishing

- (d) One (1) cleaning and finishing process consisting of the following emission units and pollution control devices:
- (1) One (1) casting cleaner shotblaster, constructed in 1968, identified as CCL1, with emissions controlled by baghouse DC4 and exhausting through stack S4, maximum capacity: 1.0 ton of castings per hour.
 - (2) One (1) casting cleaner shotblaster, constructed in 1968, identified as CCL2, with emissions controlled by baghouse DC6 and exhausting through stack R5, maximum capacity: 3.0 tons of castings per hour.
 - (3) One (1) shot blast cleaner, constructed in 1974, identified as CCL3, with emissions controlled by baghouse DC7 and exhausting through stack S10, maximum capacity: 2.5 tons of castings per hour.
 - (4) Seven (7) pedestal wheel grinders, with six (6) constructed in 1993 and one (1) constructed in 1994, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, with emissions from all of the grinders controlled by baghouse DC6 and exhausting through stack R5, maximum throughput: 0.25 ton of castings per hour, each.
 - (5) Two (2) dual wheel grinders, constructed in 1993, identified as GR3 and GR4, with emissions from both grinders controlled by baghouse DC6 and exhausting through stack R5, maximum throughput: 0.5 ton of castings per hour, each.
 - (6) One (1) 3.2 million British thermal unit per hour natural gas-fired annealing oven, constructed in 1967, identified as HT1, exhausting through stack S9, maximum capacity: 1.5 tons of iron 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 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the shotblaster (CCL1) shall not exceed 4.10 pounds per hour, when operating at a process weight rate of 1.0 ton of castings per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the shotblaster (CCL2) exhausting to baghouse DC6 shall not exceed 8.56 pounds per hour, when operating at a process weight rate of 3.0 tons of castings per hour.
- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the seven (7) pedestal wheel grinders (GR1, GR2, GR5, GR6, GR7, GR8 and GR9) shall not exceed 1.62 pounds per hour, each, when operating at a process weight rate of 0.25 tons of castings per hour, each.
- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) dual wheel grinders (GR3 and GR4) shall not

exceed 2.58 pounds per hour, each, when operating at a process weight rate of 0.5 ton of castings per hour, each.

- (e) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the shotblaster (CCL3) shall not exceed 7.58 pounds per hour, when operating at a process weight rate of 2.5 tons of castings per hour.

The pounds per hour limitations were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

D.3.2 PSD Minor Limit [326 IAC 2-2]

Pursuant to T 169-9014-00019, issued on May 14, 2002, and as revised by this permit, the PM emissions at the seven (7) pedestal wheel grinders and two (2) dual wheel grinders shall not exceed 1.96 pounds per hour and the PM₁₀ emissions shall not exceed 1.60 pounds per hour. This is equivalent to 8.59 tons of PM and 7.01 tons of PM₁₀ per year from the total of the nine (9) grinders

These limitations, in combination with Condition D.2.2(b), shall limit the potential to emit PM and PM₁₀ from the total of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, one (1) disamatic molding/pouring line, and the one (1) mold making line, identified as part of DM1, all considered part of the same modification, to less than 25 tons per year, 15 tons per year, and 100 tons per year, respectively. Therefore, these limitations rendered the 1993/1994 modification a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, are not applicable.

D.3.3 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 seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, and their control devices.

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

D.3.4 Particulate Control [326 IAC 2-7-6(6)]

- (a) In order to demonstrate compliance with Condition D.3.1, the baghouse (DC4) shall be in operation and control emissions from the shotblaster (CCL1) at all times when the shotblaster is in operation.
- (b) In order to demonstrate compliance with Condition D.3.1, the baghouse (DC6) shall be in operation and control emissions from the shotblaster (CCL2) at all times when the shotblaster is in operation.
- (c) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, the baghouse (DC6) shall be in operation and control emissions from the seven (7) pedestal grinders at all times when the any of the seven (7) pedestal grinders are in operation.
- (d) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, the baghouse (DC6) shall be in operation and control emissions from the two (2) dual wheel grinders at all times when the either of the two (2) dual wheel grinders are in operation.
- (e) In order to demonstrate compliance with Condition D.3.1, the baghouse (DC7) shall be in

operation and control emissions from the shotblaster (CCL3) at all times when the shotblaster 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.

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

D.3.5 Visible Emissions Notations

- (a) Visible emission notations of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, stack exhaust (R5) shall be performed 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.3.6 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 (DC6) used in conjunction with the seven (7) pedestal grinders (GR1, GR2, GR5, GR6, GR7, GR8 and GR9) and two (2) dual wheel grinders (GR3 and GR4), at least once per day when the grinding is in operation. When, for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 7.0 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.3.7 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, or dust traces.

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

D.3.8 Record Keeping Requirements

- (a) To document compliance with Condition D.3.5, the Permittee shall maintain records of visible emission notations of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, stack exhaust 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 grinders did not operate that day).
- (b) To document compliance with Condition D.3.6, the Permittee shall maintain records once per day of the pressure drop across the baghouse (DC6) used in conjunction with the seven (7) pedestal grinders (GR1, GR2, GR5, GR6, GR7, GR8 and GR9) and two (2) dual wheel grinders (GR3 and GR4). 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 grinders did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Sand Handling, Core Making and Mold Making

- (e) Sand handling, core making and molding making processes consisting of the following emission units and pollution control devices:
- (1) The following mold making processes:
 - (A) One (1) mold sand handling system, constructed in 1965, identified as MSH, with a maximum capacity of 100 tons of sand per hour, consisting of the following:
 - (i) One (1) muller, constructed in 1987, with emissions controlled by baghouse DC3 and exhausting through stack S6 or returned inside through stack S6R;
 - (ii) Three (3) storage silos, constructed in 1960; and
 - (iii) Conveyors with emissions controlled by baghouse DC3 and exhausting through stack S6 or returned inside through stack S6R.
 - (B) Two (2) mold making lines, identified as DM1, one constructed in 1986 with a maximum capacity of 60 tons of sand per hour and one constructed in 1993 with a maximum capacity of 30 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (C) One (1) pallet molding operation, constructed in 1965, maximum capacity: 5 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (2) The following North isocure core making processes:
 - (A) One (1) core sand handling system, constructed in 1970, identified as CSH-North, with a maximum capacity of 10 tons of sand per hour, consisting of the following:
 - (i) One (1) storage silo, equipped with a bin vent filter; and
 - (ii) Two (2) surge hoppers, equipped with an after filter.
 - (B) One (1) isocure core making operation, identified as ICM-1, with catalyst emissions controlled by a fume scrubber, exhausting through stack S8, including the following:
 - (i) Two (2) isocure core machines, constructed in 1980, identified as ICM-1a and ICM-1b, maximum capacity: 1.0 ton of sand per hour, 30 pounds of resin per hour, and 3 pounds of catalyst (Dimethylethylamine) per hour, each.
 - (ii) One (1) isocure core machine, constructed in 2005, identified as ICM-1c, maximum capacity: 0.75 tons of sand per hour, 22.5 pounds of isocure per hour, and 2.25 pounds of catalyst (Dimethylethylamine) per hour.
 - (3) The following South isocure core making processes:
 - (A) One (1) core sand handling system, constructed in 2006, identified as CSH-South, with a maximum capacity of 1.5 tons of sand per hour, consisting of the following:

- (i) One (1) storage silo, constructed in 2007, equipped with a bin vent filter; and
- (ii) One (1) surge hopper.
- (B) One (1) isocure core machine, constructed in 2006, identified as ICM-L20, with catalyst emissions controlled by a fume scrubber, exhausting to stack LA-1, maximum capacity: 1.5 tons of sand per hour, 45 pounds of resin per hour, and 4.5 pounds of non-HAP catalyst per hour.
- (4) The following shell core making processes:
 - (A) One (1) bucket elevator for shell core sand, identified as SSH-North, constructed in 1981, equipped with a filter, maximum capacity: 2.0 tons of sand per hour.
 - (B) Ten (10) shell core making machines, seven (7) constructed in 1981 and three (3) constructed in 2005, identified as SCM, maximum capacity: 2.0 tons of pre-mixed sand per hour, each and total.
- (5) One (1) air set core machine, constructed in 1997, identified as ACM, maximum capacity: 1.5 tons of sand, 3.91 pounds of alphaset and 1.30 pounds of alphacure per hour.
- (6) One (1) 0.5 million British thermal unit per hour (MMBtu/hr) natural gas-fired core baking oven, constructed in 1970, identified as CM Oven, exhausting through two (2) stacks, identified as S7A and S7B.

(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 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the mold sand handling operations (MSH), including the one (1) muller, exhausting to baghouse DC3, shall not exceed 51.3 pounds per hour, total, when operating at a process weight rate of 100 tons of sand per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the core sand handling operations, identified as CSH-North, shall not exceed 8.07 pounds per hour, when operating at a process weight rate of 2.75 tons of sand per hour.
- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the sand handling operations at the one (1) isocure process, identified as CSH-South, shall not exceed 5.4 pounds per hour when operating at a process weight rate of 1.5 tons per hour.
- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the sand handling operations at the ten (10) shell core machines, identified as SSH-North, shall not exceed 6.5 pounds per hour when operating at a process weight rate of 2.0 tons per hour.
- (e) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the sand handling operations at the one (1) core baking oven (CM Oven) shall not exceed 19.2 pounds per hour, when operating at a process weight

rate of ten (10) tons per hour.

The pounds per hour limitations were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

or

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

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

D.4.2 PSD Minor Limit [326 IAC 2-2]

- (a) Pursuant to T 169-9014-00019, issued on May 14, 2002, the emissions from the mold sand handling operations (MSH), including the one (1) muller shall be less than 5.71 pounds of PM per hour and 3.42 pounds of PM₁₀ per hour. Therefore, the potential to emit PM is limited to less than 25 tons per year and the potential to emit PM₁₀ is limited to less than 15 tons per year from the addition of the one (1) muller, rendering the 1987 modification a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, not applicable to the 1987 modification.
- (b) Pursuant to T 169-9014-00019, issued on May 14, 2002, and revised by this permit, in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 1980 modification, the following conditions apply to the two (2) isocure core machines, identified as ICM-1a and ICM-1b, constructed in 1980:
- (1) The resin usage for the total of the two (2) isocure core machines shall be less than 520,000 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month. Total catalyst (DMEA) usage for the total of the two (2) isocure processes shall be less than 52,000 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC emissions (not including catalyst) from the isocure core machines shall not exceed 0.05 pound per pound of resin.

This limitation results in a potential to emit less than forty (40) tons of VOC from the 1980 modification.

D.4.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

- (a) Pursuant to Significant Permit Modification 169-21802-00019, issued on February 28, 2006, in order to render the requirements of 326 IAC 8-1-6 (New facilities; General reduction requirements) not applicable, the following conditions shall apply to the two (2) isocure core machines, identified as ICM-1a and ICM-1b, constructed in 1980:
- (1) The resin usage for each isocure core machine shall not exceed 330,000 pounds of resin per twelve (12) consecutive month period. Total DMEA usage for each isocure process shall not exceed 33,000 pounds of DMEA per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC emissions (not including catalyst) from each of the isocure core machines shall not exceed 0.05 pound per pound of resin before controls.

Therefore, the requirements of 326 IAC 8-1-6 (New facilities; General reduction requirements) shall not apply.

- (b) Pursuant to Significant Permit Modification 169-23221-00019, issued on November 22, 2006, in order to render the requirements of 326 IAC 8-1-6 (New facilities; General reduction requirements) not applicable, the following conditions shall apply to the one (1) isocure core machine, identified as ICM-L20:
- (1) The resin usage for the isocure core machine shall not exceed 331,128 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month, and the total catalyst usage shall not exceed 33,113 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC emissions (not including catalyst) from the isocure core machine shall not exceed 0.05 pound per pound of resin before controls.

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 mold sand handling operations (MSH), the core sand handling operations for the North isocure core making process (CSH-North), the one (1) bucket elevator for shell core sand handling process (SSH-North), the one (1) isocure operation, identified as ICM-1, and the one (1) isocure machine, identified as ICM-L20.

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

D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

On or before May 3, 2010, in order to demonstrate compliance with Condition D.4.1(a) and D.4.2(a), the Permittee shall perform PM and PM₁₀ testing for the mold sand handling operations (MSH), exhausting to baghouse DC3, utilizing methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C - Performance Testing.

D.4.6 Particulate Control [326 IAC 2-7-6(6)]

- (a) In order to demonstrate compliance with Conditions D.4.1(a) and D.4.2, the baghouse (DC3) shall be in operation and control emissions from the mold sand handling operations, identified as MSH, at all times when the mold sand handling is in operation.
- (b) In order to demonstrate compliance with Condition D.4.1(b), the filters shall be in place and control emissions from the core sand handling operations, identified as CSH-North, at all times when the core sand handling is in operation.
- (c) In order to demonstrate compliance with Condition D.4.1(d) and D.4.2(b), the filter shall be in place and control emissions from the sand handling operations at the ten (10) shell core machines, identified as SSH-North, at all times when the shell core sand handling is 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.

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

D.4.7 Visible Emissions Notations [40 CFR 64]

- (a) Visible emission notations of the mold sand handling (MSH), stack exhaust (S6 and S6R), 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.4.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

The Permittee shall record the pressure drop across the baghouse (DC3) used in conjunction with the mold sand handling operations (MSH), at least once per day when the sand handling is in operation. When, for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 7.2 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.4.9 Filter Inspections

An inspection shall be performed each calendar quarter of all filters controlling the core sand handling operations for the North isocore core making process (CSH-North), the one (1) bucket elevator for shell core sand handling process (SSH-North). All defective filters shall be replaced.

D.4.10 Broken or Failed Bag or Filter Detection

- (a) For a single compartment baghouse or filter 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 or filter 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 or filter 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, or dust traces.

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

D.4.11 Record Keeping Requirements

- (a) To document compliance with Conditions D.4.2(c) and D.4.3, the Permittee shall maintain records of the catalyst and resin usage at each of the two (2) isocure core machines, identified as ICM-1a and ICM-1b, and the one (1) isocure core machine, identified as ICM-L20, for each month.
- (b) To document compliance with Conditions D.4.2(c) and D.4.3, the Permittee shall maintain records of the VOC content of binders used at each of the isocure processes each month.
- (c) Pursuant to Significant Permit Modification 169-23221-00019, issued on November 22, 2006, the Permittee shall calculate and maintain a record of the annual emissions from the one (1) scrap handling process, identified as process SI; one (1) melting and casting process, including CP, IF1, IF2, IF3, IF-4, LH1, LH2, LH3, LH4, and all of operation MP; one (1) shakeout operation, identified as operation CCS; one (1) cleaning and finishing process, including CCL1, CCL2, CCL3, GR1, GR2, GR3, GR4, GR5, GR6, GR7, GR8, GR9, and HT1; one (1) sand handling process, including MSH, CSH-North, and SSH-North; one (1) core baking oven, identified as CM Oven; ten (10) shell core machines, identified as SCM; one (1) air set core machine, identified as ACM; two (2) isocure core machines, constructed in 1980, identified as ICM-1a and ICM-1b; and the inoculation operations, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the installation of ICM-1c and L-20.
- (d) To document compliance with Condition D.4.7, the Permittee shall maintain records of visible emission notations of the mold sand handling (MSH), stack exhaust 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 mold sand handling did not operate that day).
- (e) To document compliance with Condition D.4.8, the Permittee shall maintain records once per day of the pressure drop across the baghouse (DC3) used in conjunction with the mold sand handling (MSH). 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 mold sand handling did not operate that day).
- (f) To document compliance with Condition D.4.9, the Permittee shall maintain records of the results of the inspections required under Condition D.4.9.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.4.2(c) and D.4.3 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 CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Inoculation Operations

- (f) Inoculation operations, operating since approximately 1973, exhausting inside the building, with some emissions voluntarily controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, 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 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 inoculation shall not exceed 19.2 pounds per hour, when operating at a process weight rate of 10 tons of metal per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

D.5.2 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 this facility.

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

D.5.3 Visible Emissions Notations

- (a) Visible emission notations of the inoculation stack exhausts (general ventilation and stack S1) shall be performed 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.

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

D.5.4 Record Keeping Requirements

- (a) To document compliance with Condition D.5.3, the Permittee shall maintain records of visible emission notations of the inoculation stack exhausts 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 inoculation did not operate that day).

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

SECTION D.6

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

Degreasing operations that do not exceed 145 gallons per 12 month period, except if subject to 326 IAC 20-6, including one (1) parts washer, constructed in 1987, equipped with a lid. There are no HAPs or halogenated solvents used in the degreasing operations. [326 IAC 8-3-2]

(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.6.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019

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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019

This form consists of 2 pages

Page 1 of 2

<input type="checkbox"/>	This is an emergency as defined in 326 IAC 2-7-1(12)
X	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 Section); and
X	The Permittee must submit notice in writing or by facsimile within two (2) working 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: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facilities: Pouring and cooling at the one (1) disaforma molding/pouring line
Parameter: Throughput of metal
Limit: 11,826 tons per consecutive twelve (12) month period with compliance determined at the end of each month.

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.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facilities: Pouring and cooling at the one (1) automatic molding/pouring line
Parameter: Throughput of metal
Limit: 4,613 tons per consecutive twelve (12) month period with compliance determined at the end of each month.

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.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facilities: Four (4) electric induction furnaces, IF1 through IF4
Parameter: Iron throughput
Limit: 34,700 tons per consecutive twelve (12) month period, with compliance determined at the end of each month. Each ton of steel melted shall be considered equivalent to one tenth (0.1) ton of iron throughput.

YEAR: _____

Month	Iron Throughput (tons)	Iron Throughput (tons)	Iron Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facilities: Two (2) isocure core machines, identified as ICM-1a and ICM-1b
Parameter: Total resin usage
Limit: 520,000 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Resin Usage (lbs)	Resin Usage (lbs)	Resin Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facilities: Two (2) isocure core machines, identified as ICM-1a and ICM-1b,
Parameter: Total catalyst (DMEA) usage
Limit: 52,000 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Catalyst Usage (lbs)	Catalyst Usage (lbs)	Catalyst Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facility: One (1) isocure core machine, identified as ICM-1a
Parameter: Resin usage
Limit: 330,000 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Resin Usage (lbs)	Resin Usage (lbs)	Resin Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facility: One (1) isocure core machine, identified as ICM-1a
Parameter: Catalyst (DMEA) usage
Limit: 33,000 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Catalyst Usage (lbs)	Catalyst Usage (lbs)	Catalyst Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facility: One (1) isocure core machine, identified as ICM-1b
Parameter: Resin usage
Limit: 330,000 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Resin Usage (lbs)	Resin Usage (lbs)	Resin Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facility: One (1) isocure core machine, identified as ICM-1b
Parameter: Catalyst (DMEA) usage
Limit: 33,000 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Catalyst Usage (lbs)	Catalyst Usage (lbs)	Catalyst Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facility: One (1) isocure core machine, identified as ICM-L20
Parameter: Resin usage
Limit: 331,128 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Resin Usage (lbs)	Resin Usage (lbs)	Resin Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-23344-00019
Facility: One (1) isocure core machine, identified as ICM-L20
Parameter: Catalyst usage
Limit: 33,113 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

YEAR: _____

Month	Catalyst Usage (lbs)	Catalyst Usage (lbs)	Catalyst Usage (lbs)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s 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: Manchester Metals, LLC
 Source Address: 205 Wabash Road, North Manchester, Indiana 46962
 Mailing Address: P.O. Box 345, North Manchester, Indiana 46962
 Part 70 Permit No.: T 169-23344-00019

Months: _____ **to** _____ **Year:** _____

<p>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".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> 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.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the
Technical Support Document for a Part 70 Operating Permit Renewal

Source Name: Manchester Metals, LLC
Source Location: 205 Wabash Road, North Manchester, Indiana 46962
County: Wabash
SIC Code: 3321
Permit Renewal No.: T 169-23344-00019
Permit Reviewer: CarrieAnn Paukowits/MES

On July 27, 2007, the Office of Air Quality (OAQ) had a notice published in the Wabash Plain Dealer, Wabash, Indiana, stating that Manchester Metals, LLC had applied for a Part 70 Operating Permit Renewal to continue to operate a gray iron and steel foundry. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit Renewal for this operation and provided information on how the public could review the proposed Part 70 Operating Permit Renewal 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 Part 70 Operating Permit should be issued as proposed.

On August 6, 2007, David L. Boyd of Manchester Metals, LLC submitted comments on the proposed Part 70 Operating Permit Renewal. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**):

Comment 1:

The emissions testing requirements contained in Condition D.2.5 represent substantial technical, operational and financial challenges for this facility. We would appreciate your clarification of the unit operation descriptions in order that there is a clear understanding that molding, pouring, casting cooling and mold shakeout are all separate activities.

Condition D.2.5(a) requires emissions testing for the operation described as the "disaforma molding/pouring line."

Please note that these separate and distinct unit operations are in separate physical locations joined by a transfer conveyor section.

The molding unit receives sand from the mold sand system, finished cores from core making stations and other accessories. There are no significant particulate emission situations due to the closed configuration of the molding unit and the physical properties of the materials handled.

Completed molds are moved to a conveyor for transfer to the adjacent pouring deck.

Molten metal is received in insulated ladles on overhead conveyors. Pouring takes place with the molds lined up on the conveyor section. At the end of the pouring deck conveyor portion, the molds index to an adjacent conveyor section for cooling.

Please revise the Condition D.2.5 wording to include only the description "disaforma pouring line."

Response 1:

Testing is required in order to determine compliance with the limitations in Condition D.2.2(a)(2). Those limitations are on the total PM and PM₁₀ emissions from the pouring and cooling operations at the one (1) disaforma molding/pouring line. If the pouring and cooling are tested separately the total emission rates may not exceed the limits in the permit. Therefore, the limitations and testing

requirements have been clarified in Conditions D.2.2 and D.2.5(a), as follows:

D.2.2 PSD Minor Limit [326 IAC 2-2]

(a) The Permittee shall comply with the following limitations for the one (1) disaforma molding/pouring line:

- (1) Pursuant to T 169-9014-00019, issued on May 14, 2002, the throughput of metal at the **pouring and cooling operations at the** one (1) disaforma molding/pouring line shall be less than 11,826 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) Pursuant to T 169-9014-00019, issued on May 14, 2002, and as revised by this permit, the **total** PM emission rate **from the pouring and cooling operations** shall not exceed 4.2 pounds per ton of metal throughput, and the **total** PM₁₀ emission rate **from the pouring and cooling operations** shall not exceed 2.53 pounds per ton of metal throughput.
- (3) Pursuant to this permit, the CO emission rate **from the pouring and cooling operations** shall not exceed 6.0 pounds per ton of metal throughput.

These limitations limit the potential to emit of PM, PM₁₀, and CO from the combination of this facility and the one (1) mold making line, also constructed in 1986, to less than twenty-five (25) tons per year, fifteen (15) tons per year, and one hundred (100) tons per year, respectively. Therefore, these limitations rendered the 1986 modification a minor modification, and the requirements of 326 IAC 2-2, PSD, are not applicable.

(b) The Permittee shall comply with the following limitations for the one (1) disamatic molding/pouring line:

- (1) Pursuant to this permit, the throughput of metal at the **pouring and cooling operations at the** one (1) disamatic molding/pouring line shall be less than 4,613 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) Pursuant to T 169-9014-00019, issued on May 14, 2002, and revised by this permit, the PM emission rate from the pouring operation shall not exceed 4.2 pounds per ton of metal throughput and the PM₁₀ emission rate shall not exceed 2.06 pounds per ton of metal throughput.
- (3) Pursuant to T 169-9014-00019, issued on May 14, 2002, and revised by this permit, the PM and PM₁₀ emission rates from the cooling operation shall not exceed 1.4 pounds per ton of metal throughput.
- (4) Pursuant to this permit, the CO emission rate from the ~~molding~~ **pouring and cooling operations** shall not exceed 6.0 pounds per ton of metal throughput

These limitations, in combination with Condition D.3.2, shall limit the potential to emit PM, PM₁₀ and CO from the total of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, one (1) disamatic molding/pouring line, and the one (1) mold making line, identified as part of DM1, all considered part of the same modification, to less than twenty-five (25) tons per year, fifteen (15) tons per year, and one hundred (100) tons per year, respectively. Therefore, these limitations rendered the 1993/1994 modification a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, are not applicable.

(c) The Permittee shall comply with the following limitations for the four (4) electric induction furnaces, IF1 through IF4:

- (1) Pursuant to T 169-9014-00019, issued on May 14, 2002, the iron throughput to the total of the four (4) electric induction furnaces, IF1 through IF4, shall ~~not exceed~~ **be less than** 34,700 tons per consecutive twelve (12) month period, with compliance determined at the end of each month. Each ton of steel melted shall be considered equivalent to one tenth (0.1) ton of iron throughput.
- (2) The PM emissions shall not exceed 0.9 pound per ton when melting iron and 0.1 pound per ton when melting steel, and the PM₁₀ emissions shall not exceed 0.86 pound per ton when melting iron and 0.09 pound per ton when melting steel.

These limitations shall limit the potential to emit PM to less than twenty-five (25) tons per year, and the potential to emit PM₁₀ to less than fifteen (15) tons per year, from the total of the four (4) furnaces, IF1 through IF4, rendering the 1995 modification a minor modification to an existing major source, pursuant to 326 IAC 2-2, PSD.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 180 days after issuance of this Part 70 permit renewal, in order to demonstrate compliance with Condition D.2.1(c) and D.2.2(a)(2), the Permittee shall perform PM and PM₁₀ testing for the **pouring and cooling operations at the one** (1) disaforma molding/pouring line, utilizing methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 180 days after issuance of this Part 70 permit renewal, in order to demonstrate compliance with the alternate emission factor in Condition D.2.3, the Permittee shall perform total **organic** HAPs testing for the pouring, cooling and shakeout operations using shell core sand, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

The facilities indicated on the quarterly report forms have been revised as follows:

~~Facility~~ **Facilities:** **Pouring and cooling at the one** ~~One~~ (1) disaforma molding/pouring line

~~Facility~~ **Facilities:** **Pouring and cooling at the one** ~~One~~ (1) disamatic molding/pouring line

Upon further review, the OAQ has decided to make the following additional changes to the Part 70 Operating Permit. The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

Change 1:

The Quarterly Report forms have been revised as follows:

- No deviation occurred in this ~~month~~ **quarter**.
- Deviation/s occurred in this ~~month~~ **quarter**.
Deviation has been reported on: _____

Change 2:

Conditions D.2.3 and D.2.5(b) have been revised to clarify that the HAP emission factor in Condition D.2.3 is for organic HAPs. Changes to Condition D.2.5(b) are shown in Response 1. Changes to Condition D.2.3 are as follows:

D.2.3 Emission Factor Limit

The total **organic** HAPs emissions shall be less than 0.016 pounds per pound of index material from pouring, cooling and shakeout using shell core sand.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Manchester Metals, LLC
Source Location:	205 Wabash Road, North Manchester, Indiana 46962
County:	Wabash
SIC Code:	3321
Permit Renewal No.:	T 169-23344-00019
Permit Reviewer:	CarrieAnn Paukowits/MES

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Manchester Metals, LLC relating to the operation of a gray iron and steel foundry source.

History

On July 11, 2006, Manchester Metals, LLC submitted an application to the OAQ requesting to renew its operating permit. Manchester Metals, LLC was issued a Part 70 Operating Permit on May 14, 2002.

Permitted Emission Units and Pollution Control Equipment

- (a) One (1) scrap handling process, constructed in 1968, including one (1) bridge crane and one (1) scale, identified as process SI, exhausting inside, maximum capacity: 10 tons of metal per hour.
- (b) One (1) melting and casting process consisting of the following emission units and pollution control devices:
 - (1) One (1) 1.16 million British thermal unit per hour natural gas-fired scrap charge preheater, constructed in 1970, identified as CP, exhausting inside the building, with some emissions controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1.
 - (2) Three (3) electric induction (scrap iron) furnaces, constructed in 1973 and modified in 1995, identified as IF1, IF2, and IF3, exhausting inside the building, with some emissions voluntarily controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, maximum charge rate: 3.6 tons per hour, each, and 6.5 tons of iron per hour, total.
 - (3) One (1) electric induction (stainless steel) furnace, constructed in 1966, identified as IF4, maximum charge rate: 1.0 ton per hour.
 - (4) Four (4) natural gas-fired ladle heaters, constructed in 1970, identified as LH1, LH2, LH3, and LH4, combined maximum capacity: 2.6 million British thermal units per hour, total.
 - (5) One (1) molding, pouring and cooling line, identified as the disamatic molding/pouring line, constructed in 1993, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 30 tons of molding sand and 5 tons of metal per hour.

- (6) One (1) molding, pouring and cooling line, identified as the disaforma molding/pouring line, constructed in 1986, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 60 tons of molding sand and 10 tons of metal per hour.
- (7) One (1) molding, pouring and cooling line, identified as the pallet line and floor stations, constructed prior to 1973, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 6 tons of molding sand and 1 ton of metal per hour.
- (c) One (1) shakeout operation, constructed in 1973, identified as operation CCS, with emissions controlled by baghouse DC2 and exhausting through stack S2, maximum capacity: 80 tons of sand and 10 tons of metal per hour.
- (d) One (1) cleaning and finishing process consisting of the following emission units and pollution control devices:
 - (1) One (1) casting cleaner shotblaster, constructed in 1968, identified as CCL1, with emissions controlled by baghouse DC4 and exhausting through stack S4, maximum capacity: 1.0 ton of castings per hour.
 - (2) One (1) casting cleaner shotblaster, constructed in 1968, identified as CCL2, with emissions controlled by baghouse DC6 and exhausting through stack R5, maximum capacity: 3.0 tons of castings per hour.
 - (3) One (1) shot blast cleaner, constructed in 1974, identified as CCL3, with emissions controlled by baghouse DC7 and exhausting through stack S10, maximum capacity: 2.5 tons of castings per hour.
 - (4) Seven (7) pedestal wheel grinders, with six (6) constructed in 1993 and one (1) constructed in 1994, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, with PM and PM₁₀ emissions from all of the grinders controlled by baghouse DC6 and exhausting through stack R5, maximum throughput: 0.25 ton of castings per hour, each.
 - (5) Two (2) dual wheel grinders, constructed in 1993, identified as GR3 and GR4, with emissions from both grinders controlled by baghouse DC6 and exhausting through stack R5, maximum throughput: 0.5 ton of castings per hour, each.
 - (6) One (1) 3.2 million British thermal unit per hour natural gas-fired annealing oven, constructed in 1967, identified as HT1, exhausting through stack S9, maximum capacity: 1.5 tons of iron per hour.
- (e) Sand handling, core making and molding making processes consisting of the following emission units and pollution control devices:
 - (1) The following mold making processes:
 - (A) One (1) mold sand handling system, constructed in 1965, identified as MSH, with a maximum capacity of 100 tons of sand per hour, consisting of the following:
 - (i) One (1) muller, constructed in 1987, with emissions controlled by baghouse DC3 and exhausting through stack S6 or returned inside through stack S6R;

- (ii) Three (3) storage silos, constructed in 1960; and
 - (iii) Conveyors with emissions controlled by baghouse DC3 and exhausting through stack S6 or returned inside through stack S6R.
 - (B) Two (2) mold making lines, identified as DM1, one constructed in 1986 with a maximum capacity of 60 tons of sand per hour and one constructed in 1993 with a maximum capacity of 30 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (C) One (1) pallet molding operation, constructed in 1965, maximum capacity: 5 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
- (2) The following North isocure core making processes:
 - (A) One (1) core sand handling system, constructed in 1970, identified as CSH-North, with a maximum capacity of 10 tons of sand per hour, consisting of the following:
 - (i) One (1) storage silo, equipped with a bin vent filter; and
 - (ii) Two (2) surge hoppers, equipped with an after filter.
 - (B) One (1) isocure core making operation, identified as ICM-1, with catalyst emissions controlled by a fume scrubber, exhausting through stack S8, including the following:
 - (i) Two (2) isocure core machines, constructed in 1980, identified as ICM-1a and ICM-1b, maximum capacity: 1.0 ton of sand per hour, 30 pounds of resin per hour, and 3 pounds of catalyst (Dimethylethylamine) per hour, each.
 - (ii) One (1) isocure core machine, constructed in 2005, identified as ICM-1c, maximum capacity: 0.75 tons of sand per hour, 22.5 pounds of isocure per hour, and 2.25 pounds of catalyst (Dimethylethylamine) per hour.
- (3) The following South isocure core making processes:
 - (A) One (1) core sand handling system, constructed in 2006, identified as CSH-South, with a maximum capacity of 1.5 tons of sand per hour, consisting of the following:
 - (i) One (1) storage silo, constructed in 2007, equipped with a bin vent filter; and
 - (ii) One (1) surge hopper.
 - (B) One (1) isocure core machine, constructed in 2006, identified as ICM-L20, with catalyst emissions controlled by a fume scrubber, exhausting to stack LA-1, maximum capacity: 1.5 tons of sand per hour, 45 pounds of resin per hour, and 4.5 pounds of non-HAP catalyst per hour.

- (4) The following shell core making processes:
 - (A) One (1) bucket elevator for shell core sand, identified as SSH-North, constructed in 1981, equipped with a filter, maximum capacity: 2.0 tons of sand per hour.
 - (B) Ten (10) shell core making machines, seven (7) constructed in 1981 and three (3) constructed in 2005, identified as SCM, maximum capacity: 2.0 tons of pre-mixed sand per hour, each and total.
- (5) One (1) air set core machine, constructed in 1997, identified as ACM, maximum capacity: 1.5 tons of sand, 3.91 pounds of alphaset and 1.30 pounds of alphacure per hour.
- (6) One (1) 0.5 million British thermal unit per hour (MMBtu/hr) natural gas-fired core baking oven, constructed in 1970, identified as CM Oven, exhausting through two (2) stacks, identified as S7A and S7B.
- (f) Inoculation operations, operating since approximately 1973, exhausting inside the building, with some emissions voluntarily controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, maximum capacity: 10 tons of metal per hour.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

There are no emission units operating at this source that were constructed and/or operated without a permit.

Insignificant Activities

- (a) Degreasing operations that do not exceed 145 gallons per 12 month period, except if subject to 326 IAC 20-6, including one (1) parts washer, constructed in 1987, equipped with a lid. There are no HAPs or halogenated solvents used in the degreasing operations. [326 IAC 8-3-2]
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (c) Any of the following structural steel activities, constructed in 1980:
 - (1) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent.
 - (2) Using 80 tons or less of welding consumables.
- (d) Grinding and machining operations, constructed in 1980, controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. All grinding and machining operations are maintenance operations using hand tools.
- (e) Other activities or categories not previously identified with potential, uncontrolled emissions equal to or less than insignificant activity thresholds:

- (1) Receipt, unloading, and storage of molding sand.
 - (2) Pattern Shop woodworking activities, constructed in 1973, equipped with a sock filter.
 - (3) Receipt, unloading, and storage of sand binders.
 - (4) Receipt, unloading, storage and handling of core sand and binders.
 - (5) Air compressor exhaust.
 - (6) One (1) hand dip core wash station, constructed in 1980, using less than 1 ton of isopropanol per year.
- (f) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, total capacity: 4.0 million British thermal units per hour. There are no boilers at this source.
- (g) Combustion source flame safety purging on startup.
- (h) VOC and HAP storage containers including vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (i) Refractory storage not requiring air pollution control equipment.
- (j) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.
- (k) Cleaners and solvents characterized as follows:
- (1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F); or
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

The cleaners and solvents used at this source do not contain HAPs.

- (l) Closed loop heating and cooling systems.
- (m) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs.
- (n) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (o) Process vessel degreasing and cleaning to prepare for internal repairs.
- (p) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (q) Underground conveyors.
- (r) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities

would not be associated with any production process.

- (s) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (t) On-site fire and emergency response training approved by the department.
- (u) Filter or coalescer media changeout.
- (v) A laboratory as defined in 326 IAC 2-7-1(21)(D).

Existing Approvals

Since the issuance of the Part 70 Operating Permit T 169-9014-00019 on May 14, 2002, the source has constructed or has been operating under the following approvals as well:

- (a) First Administrative Amendment 169-16172-00019, issued on October 10, 2002;
- (b) Second Administrative Amendment 169-18389-00019, issued on January 20, 2004;
- (c) Third Administrative Amendment 169-20585-00019, issued on May 4, 2005;
- (d) First Minor Source Modification 169-21321-00019, issued on August 4, 2005;
- (e) First Significant Permit Modification 169-21545-00019, issued on November 4, 2005;
- (f) Second Significant Permit Modification 169-21802-00019, issued on February 28, 2006;
- (g) First Significant Source Modification 169-23066-00019, issued on October 25, 2006; and
- (h) Third Significant Permit Modification 169-23221-00019, issued on November 22, 2006.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been revised in this Part 70 Operating Permit Renewal:

- (a) Condition D.3.1(d) and (e): Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the seven (7) pedestal wheel grinders (GR1, GR2, GR5, GR6, GR7, GR8 and GR9) exhausting to baghouse DC6 shall not exceed 5.97 pounds per hour, total, when operating at a process weight rate of 1.75 tons of castings per hour, total. Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the two (2) dual wheel grinders (GR3 and GR4) exhausting to baghouse DC6 shall not exceed 4.10 pounds per hour, total, when operating at a process weight rate of 1.0 ton of castings per hour, total.

Reason revised: Although the nine (9) grinders exhaust to the same stack, they can each operate independently. Therefore, the allowable emission rates pursuant to 326 IAC 6-3-2 are calculated separately for each grinder in this permit.

- (b) Condition D.3.2: The total throughput of castings at the seven (7) pedestal wheel grinders shall not exceed 10,220 tons per twelve (12) consecutive month period and the total

throughput of castings at the two (2) dual wheel grinders shall not exceed 5,840 tons per twelve (12) consecutive month period, the potential to emit PM shall be limited to less than 2.40 pounds per hour and the potential to emit PM₁₀ shall be limited to less than 2.40 pounds per hour. This limit, in combination with Condition D.2.2(c), shall limit the potential to emit PM from the total of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, one (1) disamatic molding/pouring line, and the one (1) mold making line, identified as part of DM1, all considered part of the same modification, to less than 25 tons per year and the potential to emit PM₁₀ to less than 15 tons per year from this modification. Therefore, this modification is a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, and 40 CFR 52.21 are not applicable.

Reason revised: The limits have been changed because the existing limits reflected a limit on the hours of operation, which is not enforceable. Therefore, the hourly limits have been revised by this permit.

- (c) Condition D.4.1(b): Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the core sand handling operations (CSH) shall not exceed 44.6 pounds per hour, when operating at a process weight rate of 50 tons of sand per hour.

Reason revised: The maximum process weight rate for the largest core sand handling process is only ten (10) tons per hour. Therefore, the allowable emission rate pursuant to 326 IAC 6-3-2 is revised by this permit.

- (d) Condition D.4.3(a): In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply to the two (2) isocure processes, identified as ICM-1a and ICM-1b, constructed in 1980:

(1) The resin usage for the total of the two (2) isocure processes shall not exceed 532,000 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month. Total catalyst (DMEA) usage for the total of the two (2) isocure processes shall not exceed 53,200 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The VOC emissions (not including catalyst) from the isocure processes shall not exceed 0.05 pound per pound of resin.

Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) shall not apply.

Reason revised: Significant Permit Modification 169-21802-00019, issued on February 28, 2006, had limited the resin usage to 532,000 pounds per twelve (12) month period and the catalyst usage to 53,200 pounds per twelve (12) month period. That limit did not account for the 1.00 ton per year potential VOC emissions from insignificant core wash station. Therefore, the limit has been revised in this renewal. The limit in effect before that permit modification did account for the 1.00 ton of VOC per year from core washing.

- (e) Condition D.4.3 (f): The outlet grain loading at the baghouse (DC3), controlling the one (1) muller and one (1) mold sand handling system, shall not exceed 0.015 grains per dry standard cubic foot and the flow rate shall not exceed 26,000 actual cubic feet per minute. This will limit the potential to emit PM from baghouse DC3 to less than 5.71 pounds per hour and the potential to emit PM₁₀ to less than 3.42 pounds per hour. Therefore, the potential to emit PM is limited to less than 25 tons per year and the

potential to emit PM_{10} is limited to less than 15 tons per year from the addition of the one (1) miller, and the modification is a minor modification to an existing major source.

Reason revised: The limit has been changed from a grain loading limit to an hourly limit equivalent to the limited emission rates in the condition to facilitate compliance determination.

(f) Condition D.4.3(g): In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply to the one (1) isocure process, identified as ICM-1c, constructed in 2005:

- (1) The resin usage for the one (1) isocure process shall not exceed 197,100 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month. Total catalyst (DMEA) usage for the one (1) isocure process shall not exceed 19,710 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) The VOC emissions (not including catalyst) from the isocure process shall not exceed 0.05 pound per pound of resin.

This limitation, in conjunction with Condition D.4.2(e), shall limit the potential to emit VOC from the 2005/2006 modification to less than forty (40) tons per year and shall render the requirements of 326 IAC 2-2, PSD, not applicable.

Reason not incorporated: The limitation is equivalent to the unrestricted potential emissions from the process. In addition, the applicant provided an actual to projected actual analysis demonstrating that 326 IAC 2-2, PSD, is not applicable to the modification. Therefore, this limitation is not necessary in order to render 326 IAC 2-2, PSD, not applicable.

(g) Condition D.2.2(b): The throughput of metal at the one (1) disaforma molding/pouring line shall not exceed 11,826 tons per consecutive twelve (12) month period, the PM emission rate shall not exceed 4.2 pounds per ton of metal throughput, and the PM_{10} emission rate shall not exceed 2.06 pounds per ton of metal throughput. This will limit the potential to emit of PM and PM_{10} from the combination of this facility and the one (1) mold making line, also constructed in 1986, to less than 25 tons per year and 15 tons per year, respectively. Therefore, this modification is a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, and 40 CFR 52.21 are not applicable.

Reason revised: The 2.06 pound per ton PM_{10} limit is overly restrictive. A limit of 2.53 pounds per ton will limit PM_{10} emissions from the 1986 modification to less than 15 tons per year. All other limits remain the same.

(h) Condition D.2.2(c): The throughput of metal at the one (1) disamatic molding/pouring line shall not exceed 7,750 tons per consecutive twelve (12) month period, the PM emission rate shall not exceed 4.2 pounds per ton of metal throughput, and the PM_{10} emission rate shall not exceed 2.06 pounds per ton of metal throughput. This will limit, in combination with the limit in Condition D.3.2, shall limit the potential to emit PM from the total of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, one (1) disamatic molding/pouring line, and the one (1) mold making line, identified as part of DM1, all considered part of the same modification, to less than 25 tons per year and the potential to emit PM_{10} to less than 15 tons per year from this modification. Therefore, this

modification is a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, and 40 CFR 52.21 are not applicable.

Reason revised: The PM and PM₁₀ emission limitation has not changed for the 1993/1994 modification. However, the limited throughput has been decreased so that the limited emission factors for PM and PM₁₀ from the pouring and cooling can be increased to match the AP-42 emission factors for each of those processes. The pouring limitation and the cooling limitation are now separate in the permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this Part 70 Operating Permit Renewal:

Condition D.1.4: Visible emission notations of the scrap handling exhaust 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. 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. 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. 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. 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.

Reason not incorporated: The scrap handling does not exhaust outside. Therefore, visible emission notations are not required.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S1	General Ventilation	35	2.5	12,000	Ambient
S2	Shakeout (CCS)	30	3.8	16,000	80-100
S4	Shotblaster (CCL1)	26	1.6	2,500	Ambient
R5	Shotblaster and Grinders (CCL2 and GR1 - GR9)	NA	5.1	14,000	Ambient
S6	Sand handling (SH & MSH)	35	4.8	30,000	Ambient
S7A	Core making oven (CM Oven)	19.5	1.0	800	200
S7B	Core making oven (CM Oven)	19.5	3.2	5,320	175
S8	Isocure Operation (ICM-1)	16.5	3.25	1,200	Ambient
S9	Annealing Oven (HT1)	20.0	3.25	3,400	1,200
S10	Shot Blast Cleaner (CCL3)	12.0	0.7	7,500	100 - 120
LA-1	Isocure Operation (ICM-L20)	18	1.5	1,200	Ambient

Emission Calculations

See Appendix A of this document for detailed emission calculations (18 pages).

County Attainment Status

The source is located in Wabash County.

Pollutant	Status
PM ₁₀	attainment
PM _{2.5}	attainment
SO ₂	attainment
NO _x	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

- (a) Wabash County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source section.
- (b) 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. Wabash 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.
- (c) Wabash County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these 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.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	897
PM ₁₀	636
SO ₂	0.687
VOC	153
CO	201
NO _x	21.8

HAPs	tons/year
Chromium	0.136
Cobalt	0.011
Nickel	0.239
Arsenic	0.047
Cadmium	0.022
Selenium	0.004
Lead	1.33
Manganese	0.739
Benzene	6.75
Dichlorobenzene	< 0.001
Formaldehyde	2.29
Hexane	0.090
Toluene	1.96
MDI	4.03
Methanol	0.058
Phenol	3.18
Acrolein	0.042
Hydrogen Cyanide	6.12
Xylenes	0.660
Naphthalene	0.044
Total Aromatic Amines	1.43
Total C2 and C5 Aldehydes	0.500
Total	24.9

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM₁₀, VOC and CO is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit of any combination of HAPs is less than twenty-five (25) tons per year.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM ₁₀	30
SO ₂	0
VOC	7
CO	1
NO _x	2
Lead (HAP)	0.24

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

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 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/Emission Unit (List item)	Potential to Emit (tons/year)						Other (HAPs)
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	
Scrap and Charge Handling (a)	19.7	11.8	0.00	0.00	0.00	0.00	0.076 Lead; 0.101 total
Melting (three (3) electric induction scrap iron furnaces (b)(2) & one (1) electric induction steel furnace (b)(3))	15.7	14.9	0.00	0.00	0.00	0.00	0.739 manganese; 1.06 total
Pouring/Casting (b)(5), (6) & (7)	65.6	38.1	0.657	4.60	197	0.329	6.75 benzene; 16.9 total
Cooling (b)(5), (6) & (7)			0.00	0.00	0.00	0.00	
Shakeout (6)	105	73.4	0.00	39.4	0.00	0.00	

- (a) This existing stationary source is major for PSD because the emissions of at least one criteria pollutant are greater than one hundred (>100) tons per year, and it is one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

Federal Rule Applicability

The following federal rules are applicable to the source:

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing 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 existing emission unit involved:

Because the unrestricted potential SO₂ and NO_x emissions are less than 100 tons per year, total, the units with emissions of those pollutants are not evaluated in this table. There are no control devices for CO control at this source. Therefore, CO emissions are also not addressed in this table. The insignificant activities at this source have potential emissions of each criteria pollutant much less than 100 tons per year. Therefore, they are also not included in this table.

Emission Unit (List Item)/ Pollutant	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)
Scrap and Charge Handling (a) (PM ₁₀)	None	Y	11.8	11.8	100	N	N
Preheater (b)(1) (PM ₁₀)	None	N	0.039	0.039	100	N	N
Preheater (b)(1) (VOC)	None	N	0.028	0.028	100	N	N
Ladle Heaters (b)(4) (PM ₁₀)	None	N	0.087	0.087	100	N	N
Ladle Heaters (b)(4) (VOC)	None	N	0.063	0.063	100	N	N
Annealing oven (d)(6) (PM ₁₀)	None	N	0.107	0.107	100	N	N
Annealing oven (d)(6) (VOC)	None	N	0.077	0.077	100	N	N

Emission Unit (List Item)/ Pollutant	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)
Pallet line and floor stations (b)(7) (PM ₁₀)	None	Y	15.2	15.2	100	N	N
Pallet line and floor stations (b)(7) (VOC)	None	N	0.613	0.613	100	N	N
Shakeout (c) (PM ₁₀)	DC2	Y	73.6	3.68	100	N	N
Shakeout (c) (VOC)	None	N	39.4	39.4	100	N	N
Casting cleaner shotblaster (CCL1) (d)(1) (PM ₁₀)	DC4	Y	7.45	0.372	100	N	N
Casting cleaner shotblaster (CCL2) (d)(2) (PM ₁₀)	DC6	Y	22.3	0.223	100	N	N
Shotblast cleaner (CCL3) (d)(3) (PM ₁₀)	DC7	Y	18.6	0.931	100	N	N
One (1) mold sand handling system, including the one (1) muller (e)(1)(A) (PM ₁₀)	DC3	Y	293	14.6	100	Y	N
One (1) core sand handling system (CSH-North) (e)(2)(A) (PM ₁₀)	Filters	Y	6.50	0.325	100	N	N
One (1) core baking oven (e)(6) (PM ₁₀)	None	Y	29.6	29.6	100	N	N
Innoculation Operations (f) (PM ₁₀)	Some through DC1	Y	59.1	59.1	100	N	N
Innoculation Operations (f) (VOC)	None	N	0.16	0.16	100	N	N
Two (2) isocore core machines (ICM-1a and ICM-1b) (e)(2)(B)(i) (VOC)	Fume Scrubber	Y	< 39.0	< 39.0	100	N	N
Ten (10) shell core making machines (e)(4) (SSH-North) (PM ₁₀)	Filter	Y	4.73	0.237	100	N	N
Ten (10) shell core making machines (e)(4) (SCM) (VOC)	None	N	13.1	13.1	100	N	N
Disaforma molding/pouring line (b)(6) (PM ₁₀)	None	Y	< 15	< 15	100	N	N

Emission Unit (List Item)/ Pollutant	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)
Disaforma molding/pouring line (b)(6) (VOC)	None	N	4.60	4.60	100	N	N
Seven (7) pedestal and two (2) dual wheel grinders (d)(4 and 5) (PM ₁₀)	DC6	Y	20.5	0.205	100	N	N
Disamatic molding/pouring line (b)(5) (PM ₁₀)	None	Y	7.98	7.98	100	N	N
Disamatic molding/pouring line (b)(5) (VOC)	None	N	3.07	3.07	100	N	N
Three (3) Electric Induction Scrap Iron Furnaces (b)(2) (PM ₁₀)	Some through DC1	Y	< 15	< 15	100	N	N
One (1) Electric Induction Steel Furnace (b)(3) (PM ₁₀)	None	Y			100	N	N
One (1) air set core machine (ACM) (e)(5) (VOC)	None	N	9.86	9.86	100	N	N
One (1) isocure core machine (ICM-1c) (e)(2)(B)(ii) (VOC)	Fume Scrubber	N	14.8	14.8	100	N	N
One (1) isocure process (CSH-South) (e)(3)(A) (PM ₁₀)	Filter	Y	3.55	3.55	100	N	N
One (1) isocure core machine (ICM-L20) (e)(3)(B) (VOC)	Fume Scrubber	Y	24.8	24.8	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the one (1) mold sand handling system (MSH), controlled by DC3. A CAM plan has been submitted and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements. The CAM includes monitoring the pressure drop across the dust collector (DC3) and conducting visual emission notations.

- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (c) This source is still not a major source of HAPs. Therefore, the requirements of 40 CFR 63, Subpart EEEEE, National Emission Standards for Hazardous Air Pollutants for Iron

and Steel Foundries, are not included in the permit. The source has proposed an alternate emission factor of 0.016 pounds of total HAPs per pound of index material from pouring, cooling and shakeout using shell core sand. Testing will be required in order to validate this emission factor.

- (d) There are no halogenated solvents used in the degreasing operations. Therefore, this source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Part 63, Subpart T.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is one of the 28 listed major source categories. The potential to emit PM and PM₁₀ is greater than or equal to one hundred (100) tons per year. Therefore, the source is a major source pursuant to 326 IAC 2-2, Prevention of Significant Deterioration (PSD). This source was a major source pursuant to 326 IAC 2-2, PSD, prior to August 7, 1977.

- (a) 1980 modification
In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions apply to the two (2) isocure core machines, identified as ICM-1a and ICM-1b, constructed in 1980:
- (1) The resin usage for the total of the two (2) isocure core machines shall be less than 520,000 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month. Total catalyst (DMEA) usage for the total of the two (2) isocure core machines shall be less than 52,000 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC emissions (not including catalyst) from the isocure core machines shall not exceed 0.05 pound per pound of resin.

Significant Permit Modification 169-21802-00019, issued on February 28, 2006, had limited the resin usage to 532,000 pounds per twelve (12) month period and the catalyst usage to 53,200 pounds per twelve (12) month period. The limits did not account for the 1.00 ton per year potential VOC emissions from insignificant core wash station. Therefore, the limits have been revised in this renewal. The limits from the initial Part 70 Operating Permit, which were in effect before Significant Permit Modification 169-21802-00019 was issued did account for the 1.00 ton per year from core washing.

This limitation results in a potential to emit less than forty (40) tons of VOC from the 1980 modification:

$((<520,000 \text{ lbs resin/yr} \times 0.05 \text{ lb VOC/lb resin}) + (<52,000 \text{ lbs/yr catalyst} \times 1.0 \text{ lb VOC/lb catalyst})) \times (1 \text{ ton}/2,000 \text{ lbs}) + 1.00 \text{ ton/yr core wash} < 40 \text{ tons VOC/yr}$

- (b) 1981 modification
The seven (7) shell core making machines, constructed in 1981, identified as SCM, have a maximum potential to emit less than 40 tons per year of VOC. The unrestricted potential to emit PM from the sand handling operations associated with the shell core making machines is greater than 25 tons per year at the 2 ton per hour elevator capacity (2 tons/hr x 8,760 hrs/yr x 3.6 lbs/ton x 1 ton/2,000 lbs = 31.5 tons/yr). The PM emission rate shall be less than 5.71 pounds per hour. This will limit the potential to emit PM to less than 25 tons per year and make this modification a minor modification to an existing

major source. The core making machines will comply with this limit by operating the filter on the bucket elevator at all times when the bucket elevator is in operation. The shell core sand handling was previously limited with the other core making processes. Upon further review, IDEM, OAQ, found that the shell core sand handling is separate from the other core sand handling operations. Therefore, the limit is now separate. There is no increase in the limited potential to emit resulting from this change.

- (c) 1986 modification
Pursuant to T 169-9014-00019, issued on May 14, 2002, the throughput of metal at the one (1) disaforma molding/pouring line shall be less than 11,826 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. The PM emission rate from the pouring and cooling shall not exceed 4.2 pounds per ton of metal throughput, total, and the PM₁₀ emission rate from the pouring and cooling shall not exceed 2.53 pounds per ton of metal throughput, total. In addition, the CO emission rate from the molding operations shall not exceed 6.0 pounds per ton of metal throughput. This limits the potential to emit of PM, PM₁₀, and CO from the combination of this facility and the one (1) mold making line, also constructed in 1986, to less than 25 tons per year, 15 tons per year, and 100 tons per year, respectively. Therefore, this modification is a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, are not applicable. A one-time test will be required to show compliance with the PM and PM₁₀ limitations of the PSD minor limit.
- (d) 1987 modification
Pursuant to T 169-9014-00019, issued on May 14, 2002, the emissions from the one (1) mold sand handling system, identified as MSH, including the one (1) muller, shall be less than 5.71 pounds of PM per hour and 3.42 pounds of PM₁₀ per hour. Therefore, the potential to emit PM is limited to less than 25 tons per year and the potential to emit PM₁₀ is limited to less than 15 tons per year from the addition of the one (1) muller, and the modification is a minor modification to an existing major source. Compliance tests on May 3, 2005, demonstrated compliance with these limitations. However, the sand throughput during the test was much lower than the capacity listed in the permit. Therefore, additional testing is required.
- (e) 1993 and 1994 modification
Pursuant to T 169-9014-00019, issued on May 14, 2002, and as revised by this permit, the following limitations render the requirements of 326 IAC 2-2, PSD, not applicable to this modification:
- (1) The PM emissions at the seven (7) pedestal wheel grinders and two (2) dual wheel grinders shall not exceed 1.96 pounds per hour and the PM₁₀ emissions shall not exceed 1.60 pounds per hour. This is equivalent to 8.59 tons of PM and 7.01 tons of PM₁₀ per year from the total of the nine (9) grinders.
 - (2) The throughput of metal at the one (1) disamatic molding/pouring line shall be less than 4,613 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (3) The PM emission rate from the pouring operation shall not exceed 4.2 pounds per ton of metal throughput and the PM₁₀ emission rate shall not exceed 2.06 pounds per ton of metal throughput.
 - (4) The PM and PM₁₀ emission rates from the cooling operation shall not exceed 1.4 pounds per ton of metal throughput.
 - (5) The CO emission rate from the molding operations shall not exceed 6.0 pounds

per ton of metal throughput

As a result of these limits, the potential to emit PM from the total of the seven (7) pedestal wheel grinders, identified as GR1, GR2, GR5, GR6, GR7, GR8, and GR9, two (2) dual wheel grinders, identified as GR3 and GR4, one (1) disamatic molding/pouring line, and the one (1) mold making line, identified as part of DM1, all considered part of the same modification, to less than 25 tons per year, the potential to emit PM₁₀ to less than 15 tons per year, and the potential to emit CO to less than 100 tons per year. Therefore, this modification is a minor modification to an existing major source, and the requirements of 326 IAC 2-2, PSD, are not applicable.

- (f) 1995 modification
Pursuant to T 169-9014-00019, issued on May 14, 2002, the iron throughput to the total of the four (4) electric induction furnaces, IF1 through IF4, shall not exceed 34,700 tons per consecutive twelve (12) month period, with compliance determined at the end of each month. Each ton of steel melted is equal to one tenth (0.1) ton of iron throughput. The PM emissions shall not exceed 0.9 pound per ton when melting iron and 0.1 pound per ton when melting steel, and the PM₁₀ emissions shall not exceed 0.86 pound per ton when melting iron and 0.09 pound per ton when melting steel. The PM emission limitations are equal to the approved emission factors for this process. Therefore, the potential to emit PM shall be limited to 15.7 tons per year, which is less than 25 tons per year, and the potential to emit PM₁₀ shall be limited to 14.9 tons per year, which is less than 15 tons per year, from the total of the four (4) furnaces, IF1 through IF4. This modification was a minor modification to an existing major source, pursuant to 326 IAC 2-2, PSD. Compliance tests on May 3, 2005, demonstrated compliance with these limitations.
- (g) 1997 modification
The one (1) air set core machine, constructed in 1997, identified as ACM, has a maximum potential to emit less than 40 tons per year of VOC. Therefore, this modification was a minor modification to an existing major source.
- (h) 2005 and 2006 modification
Pursuant to Significant Permit Modification 169-23221-00019, issued on November 22, 2006, the 2005/2006 modification is not a major modification pursuant to 326 IAC 2-2, PSD, and the requirements of 326 IAC 2-2, PSD, are not applicable.

326 IAC 2-4.1 (New Source Toxics Control)

The one (1) air set core machine, identified as ACM, the one (1) isocure core machine, identified as ICM-1c, the three (3) shell core machines, identified as part of SCM, and the one (1) isocure core machine, identified as ICM-L20, all constructed after then July 27, 1997 applicability date of this rule, emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7, Part 70. In accordance with the compliance schedule in 326 IAC 2-6-3, for sources with PM₁₀ emissions greater than 250 tons per year, an emission statement must be submitted annually by July 1. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

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

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

- (a) The particulate from the scrap handling process shall not exceed 19.2 pounds per hour, when operating at a process weight rate of 10 tons of metal per hour. Since the unrestricted potential to emit PM from this process is 6.00 pounds per hour, the scrap handling process can comply with this rule.
- (b) The particulate from the three (3) electric induction furnaces for melting iron (IF1 through IF3) shall not exceed 9.67 pounds per hour, each, when operating at a process weight rate of 3.6 tons of metal per hour, each. Since the unrestricted potential to emit PM is 5.85 pounds per hour before controls, the three (3) electric induction furnaces for melting iron can comply with this rule.
- (c) The particulate from the molding, pouring and cooling operations at the one (1) disamatic molding/pouring line shall not exceed 41.3 pounds per hour, when operating at a process weight rate of 35 tons of sand and metal per hour (5 tons of metal and 30 tons of sand). Since the unrestricted potential to emit PM from these operations is 28.0 pounds per hour (5.0 tons of castings/hr x 5.6 lbs PM/ton of castings = 28.0 lbs/hr), the pouring and cooling operations at the one (1) disamatic molding/pouring line can comply with this rule.
- (d) The particulate from the molding, pouring and cooling operations at the one (1) disaforma molding/pouring line shall not exceed 47.8 pounds per hour, when operating at a process weight rate of 70 tons of sand and metal per hour (60 tons of sand and 10 tons of metal). The unrestricted potential to emit PM from these operations is 56.0 pounds per hour (10 tons of castings/hr x 5.6 lbs PM/ton castings = 56.0 lbs/hr). The potential to emit PM from the one (1) disaforma molding/pouring line is limited to 4.2 pounds per ton of iron throughput in order to render 326 IAC 2-2, PSD, not applicable. This limit will also limit the hourly PM emission rate to 42.0 pounds per hour when operating at a process weight rate of 10 tons of iron per hour. Therefore, the operations can comply with 326 IAC 6-3-2.
- (e) The particulate from the molding, pouring and cooling operations at the one (1) pallet line and floor stations shall not exceed 15.1 pounds per hour, when operating at a process weight rate of 7.0 tons of sand and metal per hour (6 tons of sand and 1 ton of metal). Since the unrestricted potential to emit PM from these operations is 5.60 pounds per hour (1 ton of castings/hr x 5.6 lbs PM/ton castings = 5.6 lbs/hr), the pouring and cooling operations at the one (1) pallet pouring line can comply with this rule.
- (f) The particulate from the shakeout operation (CCS) exhausting to baghouse DC2 shall not exceed 50.2 pounds per hour, when operating at a process weight rate of 90 tons of sand

and metal per hour (80 tons of sand and 10 tons of metal). Since the unrestricted potential to emit PM from this process is 32.0 pounds per hour (10 tons castings/hr x 3.2 lbs PM/ton castings = 32.0 lbs/hr) before control by the baghouse, the shakeout operation can comply with this rule.

- (g) The particulate from the shotblaster (CCL1) exhausting to baghouse DC4 shall not exceed 4.10 pounds per hour, when operating at a process weight rate of 1.0 ton of castings per hour. Since the potential to emit PM from this process is 0.849 pound per hour after control by the baghouse, the shotblaster (CCL1) can comply with this rule. The baghouse (DC4) shall be in operation at all times when the shotblaster (CCL1) is in operation in order to comply with this rule.
- (h) The particulate from the shotblaster (CCL2) exhausting to baghouse DC6 shall not exceed 8.56 pounds per hour, when operating at a process weight rate of 3.0 tons of castings per hour. Since the potential to emit PM from this process is 0.509 pounds per hour after control by the baghouse, the shotblaster can comply with this rule. The baghouse (DC6) shall be in operation at all times when the shotblaster (CCL2) is in operation in order to comply with this rule.
- (i) The particulate from the seven (7) pedestal wheel grinders (GR1, GR2, GR5, GR6, GR7, GR8 and GR9) exhausting to baghouse DC6 shall not exceed 1.62 pounds per hour, each, when operating at a process weight rate of 0.25 tons of castings per hour, each. Since the potential to emit PM from the grinders is 0.043 pounds per hour, each, after control by the baghouse, the seven (7) pedestal grinders can comply with this rule. The baghouse (DC6) shall be in operation at all times when the seven (7) pedestal grinders are in operation in order to comply with this rule.
- (j) The particulate matter (PM) from the two (2) dual wheel grinders (GR3 and GR4) exhausting to baghouse DC6 shall not exceed 2.58 pounds per hour, each, when operating at a process weight rate of 0.5 ton of castings per hour, each. Since the potential to emit PM from the two (1) dual wheel grinders is 0.085 pounds per hour, each, after control by the baghouse, the two (2) dual wheel grinders can comply with this rule. The baghouse (DC6) shall be in operation at all times when the two (2) dual wheel grinders are in operation in order to comply with this rule.
- (k) The particulate from the shotblaster (CCL3) exhausting to baghouse DC7 shall not exceed 7.58 pounds per hour, when operating at a process weight rate of 2.5 tons of castings per hour. Since the potential to emit PM from this process is 2.13 pounds per hour after control by the baghouse, the shotblaster can comply with this rule. The baghouse (DC7) shall be in operation at all times when the shotblaster (CCL3) is in operation in order to comply with this rule.
- (l) The particulate from the mold sand handling operations (MSH), including the one (1) muller, exhausting to baghouse DC3, shall not exceed 51.3 pounds per hour, total, when operating at a process weight rate of 100 tons of sand per hour. Since the potential to emit PM from all operations exhausting to baghouse DC3 is 3.34 pounds per hour after control by the baghouse, the muller and mold sand handling can comply with this rule. The baghouse (DC3) shall be in operation at all times when the mold sand handling is in operation in order to comply with this rule.
- (m) The particulate from the core sand handling operations, identified as CSH-North, shall not exceed 8.07 pounds per hour, when operating at a process weight rate of 2.75 tons of sand per hour. Since the potential to emit PM from the core sand handling is 1.80 pounds per hour, after control by the filters, the core sand handling process can comply

with this rule. The filters shall be in operation at all times when the core sand handling is in operation in order to comply with this rule.

- (n) The particulate from the sand handling operations at the one (1) isocure process, identified as CSH-South, shall not exceed 5.4 pounds per hour when operating at a process weight rate of 1.5 tons per hour. The potential PM emissions are 5.4 pounds per hour. Therefore, this process can comply with the rule.
- (o) The particulate from the sand handling operations at the ten (10) shell core machines, identified as SSH-North, shall not exceed 6.5 pounds per hour when operating at a process weight rate of 2.0 tons per hour. The potential PM emissions are 1.58 pounds per hour after control by the filter. Therefore, this process can comply with the rule. The filter shall be in place at all times when the shell sand handling is in operation in order to comply with this rule.
- (p) The particulate from the inoculation shall not exceed 19.2 pounds per hour, when operating at a process weight rate of 10 tons of metal per hour. Since the potential to emit PM from these operations is 18.0 pounds per hour (10 tons of metal/hr x 1.80 lbs PM/ton metal = 18.0 lbs/hr), the inoculation operations can comply with this rule.
- (q) The particulate from the one (1) core baking oven (CM Oven) shall not exceed 19.2 pounds per hour, when operating at a process weight rate of 10 tons per hour. Since the potential to emit PM from this operation is 9.00 pounds per hour (10 tons castings/hr x 0.9 lbs PM/ton castings = 9.00 lbs/hr), the core baking oven can comply with this rule.
- (r) The potential particulate emissions from the scrap charge preheater (CP), the one (1) electric induction furnace for melting stainless steel (IF4), the four (4) natural gas-fired ladle heaters (LH1), the one (1) annealing oven (HT1), two (2) molding making lines (DM1), insignificant structural steel operations, pallet molding operation, insignificant hand grinding and machining, insignificant loading and unloading and insignificant woodworking are less than 0.551 pounds per hour, each.
- (s) The insignificant welding consumes less than 625 pounds of weld wire or rod per day. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the welding is exempt from the requirements of 326 IAC 6-3.
- (t) Less than 3,400 inches per hour of stock 1-inch thickness or less is cut at the insignificant torch cutting. Therefore, pursuant to 326 IAC 6-3-1(b)(10), the torch cutting is exempt from the requirements of 326 IAC 6-3.

The limitations of (a) through (q) are based upon the following:

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:

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

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

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

326 IAC 7.1 (Sulfur Dioxide Emission Limitations)

All facilities at this source have a potential to emit less than twenty-five (25) tons per year and ten (10) pounds per hour of SO₂. Therefore, the requirements of 326 IAC 7.1 are not applicable.

326 IAC 8-1-6 (New facilities; General reduction requirements)

- (a) The potential to emit VOC from the ten (10) shell core making machines, identified as SCM, one (1) airset core machine, identified as ACM, and one (1) isocure core machine, identified as ICM-1c, each constructed after January 1, 1980, is less than 25 tons per year, each. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.
- (b) The shakeout operations were constructed prior to January 1, 1980. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.
- (c) Pursuant to Significant Permit Modification 169-21802-00019, issued on February 28, 2006, in order to render the requirements of 326 IAC 8-1-6 (New facilities; General reduction requirements) not applicable, the following conditions shall apply to the two (2) isocure core machines, identified as ICM-1a and ICM-1b, constructed in 1980:
 - (1) The resin usage for each isocure core machine shall not exceed 330,000 pounds of resin per twelve (12) consecutive month period. Total DMEA usage for each isocure process shall not exceed 33,000 pounds of DMEA per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC emissions (not including catalyst) from each of the isocure core machines shall not exceed 0.05 pound per pound of resin before controls.

This will limit the potential to emit VOC to less than twenty-five (25) tons per year from each isocure core machine.

- (d) Pursuant to Significant Permit Modification 169-23221-00019, issued on November 22, 2006, in order to render the requirements of 326 IAC 8-1-6 (New facilities; General reduction requirements) not applicable, the following conditions shall apply to the one (1) isocure core machine, identified as ICM-L20:
 - (1) The resin usage for the isocure core machine shall not exceed 331,128 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month, and the total catalyst usage shall not exceed 33,113 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) The VOC emissions (not including catalyst) from the isocure core machine shall not exceed 0.05 pound per pound of resin before controls.

This will limit the potential to emit VOC to less than twenty-five (25) tons per year from the isocure core machine, identified as ICM-L20.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

- (a) The insignificant degreaser is a maintenance shop parts washer constructed in 1987. Therefore, the requirements of 326 IAC 8-3-2 are applicable. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:
 - (1) Equip the cleaner with a cover;

- (2) Equip the cleaner with a facility for draining cleaned parts;
 - (3) Close the degreaser cover whenever parts are not being handled in the cleaner;
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (5) Provide a permanent, conspicuous label summarizing the operation requirements;
 - (6) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.
- (b) The requirements of 326 IAC 8-3-5 are not applicable to the one (1) insignificant parts washer because it was constructed prior to July 1, 1991 in Wabash County.

326 IAC 9-1 (Carbon Monoxide Emission Limitations)

This source does not conduct petroleum refining, ferrous metal melting or refuse incineration. Therefore, the requirements of 326 IAC 9-1 do not apply.

326 IAC 11-1 (Existing Foundries)

This foundry does not operate a cupola. Therefore, the requirements of 326 IAC 11-1 are not applicable.

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.

- (a) The source has applicable compliance determination conditions as follows:

Testing Requirements

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
One (1) disaforma molding/pouring line	N/A	Within 180 days	PM & PM ₁₀	Initial Test	326 IAC 6-3-2 Limitation to render 326 IAC 2-2 not applicable
Pouring, cooling and shakeout using shell core sand	N/A	Within 180 days	Total HAPs	Initial Test	Verify alternate emission factor of 0.0168 pounds of total HAPs per pound of index material
Mold sand handling operations (MSH)	Baghouse DC3	On or before May 3, 2010 (5 years after last test)	PM & PM ₁₀	Repeat Initial Test due to last test not being at full capacity	326 IAC 6-3-2 Limitation to render 326 IAC 2-2 not applicable

Control Device Operation Requirements:

- (1) In order to demonstrate compliance with 326 IAC 6-3-2, the baghouse (DC2) shall be in operation and control emissions from the shakeout process (CCS) at all times when the shakeout process is in operation.
- (2) In order to demonstrate compliance with 326 IAC 6-3-2, the baghouse (DC4) shall be in operation and control emissions from the shotblaster (CCL1) at all times when the shotblaster is in operation.
- (3) In order to demonstrate compliance with 326 IAC 6-3-2, the baghouse (DC6) shall be in operation and control emissions from the shotblaster (CCL2) at all times when the shotblaster is in operation.
- (4) In order to demonstrate compliance with 326 IAC 6-3-2 and the limits that render 326 IAC 2-2 not applicable, the baghouse (DC6) shall be in operation and control emissions from the seven (7) pedestal grinders at all times when the any of the seven (7) pedestal grinders are in operation.
- (5) In order to demonstrate compliance with 326 IAC 6-3-2 and the limits that render 326 IAC 2-2 not applicable, the baghouse (DC6) shall be in operation and control emissions from the two (2) dual wheel grinders at all times when the either of the two (2) dual wheel grinders are in operation.
- (6) In order to demonstrate compliance with 326 IAC 6-3-2, the baghouse (DC7) shall be in operation and control emissions from the shotblaster (CCL3) at all times when the shotblaster is in operation.
- (7) In order to demonstrate compliance with 326 IAC 6-3-2 and the limits that render 326 IAC 2-2 not applicable, the baghouse (DC3) shall be in operation and control emissions from the mold sand handling operations (MSH) at all times when the mold sand handling is in operation.
- (8) In order to demonstrate compliance with 326 IAC 6-3-2, the filters shall be in place and control emissions from the core sand handling operations, identified as CSH-North, at all times when the core sand handling is in operation.

- (9) In order to demonstrate compliance with 326 IAC 6-3-2 and the limits that render 326 IAC 2-2 not applicable, the filter shall be in place and control emissions from the sand handling operations at the ten (10) shell core machines, identified as SSH-North, at all times when the core sand handling is in operation.

(b) The compliance monitoring requirements applicable to this source are as follows:

Facility	Control	Parameter	Frequency	Range	Excursions and Exceedances	Limit or Requirement
Three (3) electric induction furnaces (IF1 - IF3)	N/A	Visible Emissions	Daily	Normal-Abnormal	Response Steps	326 IAC 6-3-2 Limitation rendering 326 IAC 2-2 not applicable
One (1) shakeout operation (CCS)	Baghouse (DC2)	Water Pressure Drop	Daily	1.0 to 5.0 inches	Response Steps	326 IAC 6-3-2
		Visible Emissions		Normal-Abnormal		
Seven (7) pedestal wheel grinders & two (2) dual wheel grinders (GR1 - GR9)	Baghouse (DC6)	Water Pressure Drop	Daily	3.0 to 7.0 inches	Response Steps	326 IAC 6-3-2 Limitation rendering 326 IAC 2-2 not applicable
		Visible Emissions		Normal-Abnormal		
Mold sand handling operations (MSH)	Baghouse DC3	Water Pressure Drop	Daily	3.0 to 7.2 inches	Response Steps	326 IAC 6-3-2 Limitation rendering 326 IAC 2-2 not applicable
		Visible Emissions		Normal-Abnormal		
Core sand handling (CSH-North)	Filters	Inspections	Quarterly	Failure Detection	Replace defective filters	326 IAC 6-3-2
Shell core sand handling (SSH-North)	Filter	Inspection	Quarterly	Failure Detection	Replace defective filters	326 IAC 6-3-2 Limitation rendering 326 IAC 2-2 not applicable
Inoculation	N/A	Visible Emissions	Daily	Normal-Abnormal	Response Steps	326 IAC 6-3-2

These monitoring conditions are also necessary to ensure compliance with 326 IAC 2-7.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on July 11, 2006. Additional information was received on January 29, February 2, March 1, March 4, March 19, March 27, April 3, April 5, April 12, April 16, April 18, April 24, April 26, and May 2, 2007.

Conclusion

The operation of this gray iron and steel foundry source shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T 169-23344-00019.

**Appendix A: Emission Calculations
Scrap Handling and Melting**

**Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowits
Date: June 6, 2007**

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Scrap and charge handling SCC# 3-04-003-15 FIRE 6.01 AP-42 Ch. 12.10 Fifth edition 1995	7.5	PM	0.60	19.71			19.71
		PM-10	0.36	11.83			11.83
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	0.00	0.00			0.00
		chromium	0.00023	0.0076			0.0076
		cobalt	0.00002	0.0007			0.0007
		nickel	0.0004	0.0131			0.0131
		arsenic	0.00008	0.0026			0.0026
		cadmium	0.00004	0.0013			0.0013
		selenium	0.00001	0.0003			0.0003
		Lead	0.002	0.076			0.076

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Iron Melting - Electric Induction Furnaces (IF1, IF2 & IF3) Source of Criteria Pollutant Factors: EPA SCC# 3-04-003-03 FIRE 6.01 AP-42 Ch. 12.10 Fifth edition 1995	6.5	PM	0.90	25.62			25.62
		PM-10	0.86	24.48			24.48
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	0.00	0.00			0.00
		chromium	0.00023	0.0065			0.0065
		cobalt	0.00002	0.0006			0.0006
		nickel	0.0004	0.0114			0.0114
		arsenic	0.00008	0.0023			0.0023
		cadmium	0.00004	0.0011			0.0011
		manganese	0.0225	0.6406			0.6406
		selenium	0.00001	0.0003			0.0003
		Lead	0.009	0.256			0.2562

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Steel Melting - Electric Induction Furnace (IF4) Source of Criteria Pollutant Factors: EPA SCC# 3-04-007-05	1.0	PM	0.10	0.44			0.44
		PM-10	0.09	0.39			0.39
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	0.00	0.00			0.00
		chromium	0.00023	0.0010			0.0010
		cobalt	0.00002	0.0001			0.0001
		nickel	0.0004	0.0018			0.0018
		arsenic	0.00008	0.0004			0.0004
		cadmium	0.00004	0.0002			0.0002
		manganese	0.0225	0.0986			0.0986
		selenium	0.00001	0.0000			0.0000
		Lead	0.009	0.039			0.039

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Magnesium Treatment/Inoculation Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-21 AP-42 Ch 12.10 Fifth edition 1995	7.5	PM	1.80	59.13			59.13
		PM-10	1.80	59.13			59.13
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.01	0.164			0.164
		CO	0.00	0.00			0.00
		Lead	0.00	0.00			0.00

Methodology:

Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs

Total For All Pouring/Casting and Cooling Considering Melting Bottleneck of 7.5 tons metal/hr

Company Name: Manchester Metals, LLC
 Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
 Permit Number: T 169-23344-00019
 Reviewer: CarrieAnn Paukowits
 Date: June 6, 2007

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting - Total	7.5	PM	4.20	138.0			138.0
Source of Criteria		PM-10	2.06	67.7			67.7
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.657			0.657
FIRE 6.01	FIRE 5.0	NOx	0.01	0.329			0.329
SCC# 3-04-003-18	FIRE 5.0	VOC	0.14	4.60			4.60
(except as noted)		CO	6.00	197			197
		chromium	0.0016	0.053			0.053
		cobalt	0.00013	0.004			0.004
		nickel	0.00281	0.092			0.092
		arsenic	0.00055	0.018			0.018
		cadmium	0.00025	0.008			0.008
		selenium	0.00004	0.001			0.001
		Lead	0.01617	0.531			0.531
Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling - total	7.5	PM	1.40	46.0	none		46.0
Source of Criteria		PM-10	1.40	46.0	none		46.0
Pollutant Factors:		SO2	0.00	0.00			0.00
FIRE 6.01		NOx	0.00	0.00			0.00
SCC# 3-04-003-25		VOC	0.00	0.00			0.00
		CO	---	0.00			0.00
		Lead	---	0.00			0.00

Methodology:

Ef = Emission factor
 Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
 Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
 1ton = 2000 lbs

**Appendix A: Emission Calculations
Pouring and Cooling
Maximum per Line**

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: June 6, 2007

**These calculations are the maximum potential emissions per pouring, casting and cooling line for evaluation of 326 IAC 2-2 applicability.
The total for all pouring/casting and cooling is on page 2.**

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting - disamatic Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-18 (except as noted)	5.0	PM	4.20	92.0			92.0
		PM-10	2.06	45.1			45.1
	FIRE 5.0	SO2	0.02	0.438			0.438
		NOx	0.01	0.219			0.219
		VOC	0.14	3.07			3.07
		CO	6.00	131.4			131.4
		chromium	0.0016	0.035			0.035
		cobalt	0.00013	0.003			0.003
		nickel	0.00281	0.062			0.062
		arsenic	0.00055	0.012			0.012
		cadmium	0.00025	0.005			0.005
		selenium	0.00004	0.001			0.001
		Lead	0.01617	0.354			0.354

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling - disamatic Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-25	5.0	PM	1.40	30.7	none		30.7
		PM-10	1.40	30.7	none		30.7
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	---	0.00			0.00
		Lead	---	0.00			0.00

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting - disaforma Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-18 (except as noted)	7.5	PM	4.20	138.0			138.0
		PM-10	2.06	67.7			67.7
	FIRE 5.0	SO2	0.02	0.657			0.657
		NOx	0.01	0.329			0.329
		VOC	0.14	4.60			4.60
		CO	6.00	197.1			197.1
		chromium	0.0016	0.053			0.053
		cobalt	0.00013	0.004			0.004
		nickel	0.00281	0.092			0.092
		arsenic	0.00055	0.018			0.018
		cadmium	0.00025	0.008			0.008
		selenium	0.00004	0.001			0.001
		Lead	0.01617	0.531			0.531

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling - disaforma Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-25	7.5	PM	1.40	46.0	none		46.0
		PM-10	1.40	46.0	none		46.0
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	---	0.00			0.00
		Lead	---	0.00			0.00

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting - pallet Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-18 (except as noted)	1.0	PM	4.20	18.4			18.4
		PM-10	2.06	9.02			9.02
	FIRE 5.0	SO2	0.02	0.088			0.088
		NOx	0.01	0.044			0.044
		VOC	0.14	0.613			0.613
		CO	6.00	26.3			26.3
		chromium	0.0016	0.0070			0.007
		cobalt	0.00013	0.0006			0.001
		nickel	0.00281	0.0123			0.012
		arsenic	0.00055	0.0024			0.002
		cadmium	0.00025	0.0011			0.001
		selenium	0.00004	0.0002			0.000
		Lead	0.01617	0.0708			0.071

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling - pallet Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-25	1.0	PM	1.40	6.13	none		6.13
		PM-10	1.40	6.13	none		6.13
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	---	0.00			0.00

Methodology:

Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: June 6, 2007

Totals after melting bottleneck of 7.5 tons of metal per hour

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Castings Shakeout Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-31 AP-42 Ch. 12.10 Fifth edition 1995	7.50	PM	3.20	105.1	BH DC2	95.00%	5.26	
		PM-10	2.24	73.58	BH DC2	95.00%	3.68	
		SO2	0.00	0.00				0.00
		NOx	0.00	0.00				0.00
		VOC	1.20	39.42				39.42
		CO	6.00	197.1				197.1
		chromium	0.00122	0.040	BH DC2	95.00%	0.0020	
		cobalt	0.0001	0.003	BH DC2	95.00%	0.0002	
		nickel	0.00214	0.070	BH DC2	95.00%	0.0035	
		arsenic	0.00042	0.014	BH DC2	95.00%	0.0007	
		cadmium	0.00019	0.006	BH DC2	95.00%	0.0003	
		selenium	0.00003	0.001	BH DC2	95.00%	0.00005	
		Lead	0.01232	0.405	BH DC2	95.00%	0.0202	

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Castings Cleaning and Finishing - total Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	7.50	PM	17.00	74.5	Lowest CE	95.00%	3.72	
		PM-10	1.70	7.45		95.00%	0.372	
		SO2	0.00	0.00				0.00
		NOx	0.00	0.00				0.00
		VOC	0.00	0.00				0.00
		CO	0.00	0.00				0.00
		chromium	0.00646	0.0283		95.00%	0.0014	
		cobalt	0.00051	0.0022		95.00%	0.0001	
		nickel	0.01139	0.0499		95.00%	0.0025	
		arsenic	0.00221	0.0097		95.00%	0.0005	
		cadmium	0.00102	0.0045		95.00%	0.0002	
		selenium	0.00017	0.0007		95.00%	0.00004	
		Lead	0.0045	0.0197		95.00%	0.0010	

Total for individual equipment for the purpose of 326 IAC 2-2 applicability evaluation.

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Castings Cleaning and Finishing (Shotblaster CCL1) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	1.00	PM	17.00	74.46	DC4	95.00%	3.72	
		PM-10	1.70	7.45		95.00%	0.372	
		SO2	0.00	0.00				0.00
		NOx	0.00	0.00				0.00
		VOC	0.00	0.00				0.00
		CO	0.00	0.00				0.00
		chromium	0.00646	0.0283		95.00%	0.0014	
		cobalt	0.00051	0.0022		95.00%	0.0001	
		nickel	0.01139	0.0499		95.00%	0.0025	
		arsenic	0.00221	0.0097		95.00%	0.0005	
		cadmium	0.00102	0.0045		95.00%	0.0002	
		selenium	0.00017	0.0007		95.00%	0.00004	
		Lead	0.0045	0.0197		95.00%	0.0010	

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Castings Cleaning and Finishing (Shotblaster CCL2) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	3.00	PM	17.00	223.4	DC6	99.00%	2.23	
		PM-10	1.70	22.3		99.00%	0.223	
		SO2	0.00	0.00				0.00
		NOx	0.00	0.00				0.00
		VOC	0.00	0.00				0.00
		CO	0.00	0.00				0.00
		chromium	0.00646	0.085		99.00%	0.0008	
		cobalt	0.00051	0.007		99.00%	0.0001	
		nickel	0.01139	0.150		99.00%	0.0015	
		arsenic	0.00221	0.029		99.00%	0.0003	
		cadmium	0.00102	0.013		99.00%	0.0001	
		selenium	0.00017	0.002		99.00%	0.00002	
		Lead	0.0045	0.059		99.00%	0.0006	

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Castings Cleaning and Finishing (Shotblaster CCL3) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	2.500	PM	17.00	186.2	DC7	95.00%	9.31	
		PM-10	1.70	18.6		95.00%	0.931	
		SO2	0.00	0.00				0.00
		NOx	0.00	0.00				0.00
		VOC	0.00	0.00				0.00
		CO	0.00	0.00				0.00
		chromium	0.00646	0.071		95.00%	0.0035	
		cobalt	0.00051	0.006		95.00%	0.0003	
		nickel	0.01139	0.125		95.00%	0.0062	
		arsenic	0.00221	0.024		95.00%	0.0012	
		cadmium	0.00102	0.011		95.00%	0.0006	
		selenium	0.00017	0.002		95.00%	0.0001	
		Lead	0.0045	0.049		95.00%	0.0025	

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	
Castings Cleaning and Finishing (9 grinders, GR1-GR9) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995	2.750	PM	17.00	204.8	DC6	99.00%	2.05	
		PM-10	1.70	20.5		99.00%	0.205	
		SO2	0.00	0.00				0.00
		NOx	0.00	0.00				0.00
		VOC	0.00	0.00				0.00
		CO	0.00	0.00				0.00
		chromium	0.00646	0.078		99.00%	0.0008	
		cobalt	0.00051	0.006		99.00%	0.0001	
		nickel	0.01139	0.137		99.00%	0.0014	
		arsenic	0.00221	0.027		99.00%	0.0003	
		cadmium	0.00102	0.012		99.00%	0.0001	
		selenium	0.00017	0.002		99.00%	0.00002	
		Lead	0.0045	0.054		99.00%	0.0005	

**Appendix A: Emission Calculations:
Core Making**

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 4696:
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Application Date: June 6, 2007

Potential Emissions based on resin and catalyst usage

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Max Catalyst Usage (lb Catalyst/ton cores) The catalyst does not contain HAPs	Potential VOC Emissions from resin evap (tons/yr)	Potential VOC Emissions from Catalyst usage (tons/yr)	Total Potential VOC Emissions (tons/yr)
ICM-1a (part of ICM-1)	1980	1	1.5%	1.5	3.00	6.57	13.14	19.7
ICM-1b (part of ICM-1)	1980	1	1.5%	1.5	3.00	6.57	13.14	19.7
ICM-1c (part of ICM-1)	2005	0.75	1.5%	1.5	3.00	4.93	9.86	14.8
ICM-L20	2006	1.5	1.5%	1.5	3.00	9.86	19.7	29.6
ACM (Air Set Cores)	1997	1.5	0.2%	1.5	0.00	9.86	0.0	9.86
SCM (Shell Cores)	1981 and 2005	2	3.0%	1.5	0.00	13.14	0.0	13.14
Total								44.3

Machine	Date of Construction	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Percent Part 1 Resin	Percent Part 2 Resin	Total Weight % VOC	Weight % MDI	Weight % Methanol	Weight % Phenol	Weight % Formaldehyde	MDI Emissions (tons/yr)	Methanol Emissions (tons/yr)	Phenol Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Total HAP Emissions (tons/yr)
ICM-1a (part of ICM-1)	1980	1.5	49%	51%	37%	10.20%	0.98%	4.90%	0.07%	0.947	0.015	0.073	0.001	1.035
ICM-1b (part of ICM-1)	1980	1.5	49%	51%	51%	10.20%	0.98%	4.90%	0.07%	0.947	0.015	0.073	0.001	1.035
ICM-1c (part of ICM-1)	2005	1.5	49%	51%	51%	10.20%	0.98%	4.90%	0.07%	0.710	0.014	0.071	0.001	0.797
ICM-L20	2006	1.5	49%	51%	51%	10.20%	0.98%	4.90%	0.07%	1.421	0.015	0.074	0.001	1.511
ACM (Air Set Cores)	1997	1.5	75%	25%	25%	0.00%	0.00%	0.00%	0.38%	0.000	0.000	0.000	2.250	2.250
Total										2.131	0.029	0.145	0.002	2.308

Limits Necessary to render 326 IAC 8-1-6 (BACT) not applicable

Core Machines	Resin usage limit (lbs/yr)	Resin Emission Factor (lb VOC/lb Resin)	Resin VOC PTE (tons/yr) unlimited	Catalyst usage limit (lbs/yr)	Catalyst Emission Factor (lb VOC/lb Catalyst)	Catalyst VOC PTE (tons/yr)	VOC PTE (tons/yr)
ICM-1a (part of ICM-1)	330000	0.05	8.25	33,000	1.00	16.50	24.8
ICM-1b (part of ICM-1)	330000	0.05	8.25	33,000	1.00	16.50	24.8
ICM-L20	331128	0.05	8.28	33,113	1.00	16.56	24.8

Limits Necessary to render 326 IAC 2-2 (PSD) not applicable

Core Machines	Resin usage limit (lbs/yr)	Resin Emission Factor (lb VOC/lb Resin)	Resin VOC PTE (tons/yr) unlimited	Catalyst usage limit (lbs/yr)	Catalyst Emission Factor (lb VOC/lb Catalyst)	Catalyst VOC PTE (tons/yr)	VOC PTE (tons/yr)
ICM-1a and ICM-1b	520000	0.05	13.00	52,000	1.00	26.00	39.0

Methodology

Emission factors based on OCMA study.
 Conservative estimate of uncontrolled emissions so that no stack test would be necessary to verify emissions.
 Weight % HAP = Weight % in the part x Percent Part
 HAP Emissions = Weight % HAP/ Weight % VOC x VOC Emission Factor
 For Air Set Cores, alpha set is considered Part 1 resin and alphacure is considered Part 2 resin.

Core Making Oven (CM Oven)

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Core Making (ovens)	7.5	PM	0.90	29.57	none		29.57
Source of Criteria		PM-10	0.90	29.57	none		29.57
Pollutant Factors:		SO2	0.00	0.00	none		0.00
FIRE 6.01		NOx	0.50	16.43	none		16.43
SCC# 3-04-003-53		VOC	---	---	none		---
		CO	---	---	none		0.00
		Lead	---	0.00	none		0.00

Heat Input Capacity
MMBtu/hr 0.5

Potential Throughput
MMCF/yr 4.38

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
Potential Emission in tons/yr	0.004	0.017	0.001	0.219	0.012	0.184

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combine

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	0.00210	0.00120	0.07500	1.80000	0.00340
Potential Emission in tons/yr	0.000005	0.000003	0.0002	0.004	0.000007

Emission Factor in lb/MMcf	HAPs - Metals					Total
	Lead	Cadmium	Chromium	Manganese	Nickel	
	0.0005	0.0011	0.0014	0.0004	0.0021	
Potential Emission in tons/yr	0.000001	0.000002	0.000003	0.000001	0.000005	0.004

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu, MMCF = 1,000,000 cubic ft
 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
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations
HAP Emissions
Pouring-Cooling-Shakeout based on Binder Systems**

**Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: June 6, 2007**

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to two (2) isocure core machines (ICM-1a and ICM-1b)

Annual Usage of Index Material (lbs/yr) **525600**
Binder System Isocure Phenolic Urethane

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake (Resin)	Phenolic Urethane (Resin)	Phenolic Hotbox (Resin)	Green Sand (Seacoal)	Core Oil (Core Oil)	Shell (Resin)	Low Nitrogen Furan (Resin)	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox (Resin)	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Silicate & Ester (Sugar & Ester)	Pollutant Emissions (lbs/yr)	Pollutant Emissions (tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	16.294	0.008
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	2812.486	1.406
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	11.563	0.006
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	553.457	0.277
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	230.738	0.115
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	11.563	0.006
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	69.379	0.035
Phenol	0.000975	0.003904	0.002033	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	2051.942	1.026
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	437.825	0.219
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.000302	0.000037	0.000094	184.486	0.092
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	115.106	0.058
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	6493.788	3.247

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to ten (10) shell core making machines

Annual Usage of Index Material (lbs/yr) **1051200**
Binder System shell

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake (Resin)	Phenolic Urethane (Resin)	Phenolic Hotbox (Resin)	Green Sand (Seacoal)	Core Oil (Core Oil)	Shell (Resin)	Low Nitrogen Furan (Resin)	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox (Resin)	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Silicate & Ester (Sugar & Ester)	Pollutant Emissions (lbs/yr)	Pollutant Emissions (tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	49.406	0.025
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	7008.350	3.504
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	36.792	0.018
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	11064.931	5.532
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	614.952	0.307
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	60.970	0.030
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	122.990	0.061
Phenol	0.000975	0.003904	0.002033	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	2581.747	1.291
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	2950.718	1.475
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.000302	0.000037	0.000094	2458.757	1.229
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	614.952	0.307
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.016000	0.004777	0.031842	0.007364	0.015939	0.003943	16819.200	8.410

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) air set core machine

Annual Usage of Index Material (lbs/yr) **45640**
Binder System Isocure Phenolic Nobake

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake (Resin)	Phenolic Urethane (Resin)	Phenolic Hotbox (Resin)	Green Sand (Seacoal)	Core Oil (Core Oil)	Shell (Resin)	Low Nitrogen Furan (Resin)	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox (Resin)	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Silicate & Ester (Sugar & Ester)	Pollutant Emissions (lbs/yr)	Pollutant Emissions (tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	0.228	0.000
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	511.574	0.256
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	0.456	0.000
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	1.324	0.001
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	4.427	0.002
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	2.236	0.001
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	2.236	0.001
Phenol	0.000975	0.003904	0.002033	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	44.499	0.022
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	28.936	0.014
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.000302	0.000037	0.000094	2.236	0.001
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	140.114	0.070
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	738.175	0.369

Appendix A: Emission Calculations
HAP Emissions
Pouring-Cooling-Shakeout based on Binder Systems

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: May 18, 2007

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure machine (ICM-1c)

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
197100	Phenolic Urethane

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake (Resin)	Phenolic Urethane (Resin)	Phenolic Hotbox (Resin)	Green Sand (Seacoal)	Core Oil (Core Oil)	Shell (Resin)	Low Nitrogen Furan (Resin)	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox (Resin)	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Sili-cate & Ester (Sugar & Ester)	Pollutant Emissions (lbs/yr)	Pollutant Emissions (tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	6.110	0.003
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	1054.682	0.527
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	4.336	0.002
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	207.546	0.104
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	86.527	0.043
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	4.336	0.002
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	26.017	0.013
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	769.478	0.385
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	164.184	0.082
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.000302	0.000037	0.000094	69.182	0.035
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	43.165	0.022
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	2435.171	1.218

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure core machine (ICM-L20)

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
394200	Phenolic Urethane

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake (Resin)	Phenolic Urethane (Resin)	Phenolic Hotbox (Resin)	Green Sand (Seacoal)	Core Oil (Core Oil)	Shell (Resin)	Low Nitrogen Furan (Resin)	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox (Resin)	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Sili-cate & Ester (Sugar & Ester)	Pollutant Emissions (lbs/yr)	Pollutant Emissions (tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	12.220	0.006
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	2109.364	1.055
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	8.672	0.004
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	415.093	0.208
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	173.054	0.087
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	8.672	0.004
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	52.034	0.026
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	1538.957	0.769
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	328.369	0.164
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.000302	0.000037	0.000094	138.364	0.069
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	86.330	0.043
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	4870.341	2.435

METHODOLOGY

HAPS emission rate (tons/yr) = Annual Usage (lbs/yr) * Emission Factor (lbs Chemical/lbs Index) * 1 ton/2000 lbs

Appendix A: Emission Calculations
HAP Emission Limitations
Pouring-Cooling-Shakeout based on Binder Systems

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: May 18, 2007

Limited PTE due to limited production rates for VOC limits

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to two (2) isocure core machines (ICM-1a and ICM-1b)

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
520000	Phenolic Urethane

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake	Phenolic Urethane	Phenolic Hotbox	Green Sand	Core Oil	Shell	Low Nitrogen Furan	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Silicate & Ester (Sugar & Ester)	Pollutant Emissions	Pollutant Emissions
	(Resin)	(Resin)	(Resin)	(Seacoal)	(Core Oil)	(Resin)	(Resin)	(Resin)	(Resin)	(Resin)	(Resin)	(lbs/yr)	(tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	16.120	0.008
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	2782.520	1.391
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	11.440	0.006
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	547.560	0.274
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	228.280	0.114
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	11.440	0.006
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	68.640	0.034
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	2030.080	1.015
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	433.160	0.217
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.003032	0.000037	0.000094	182.520	0.091
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	113.880	0.057
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	6424.600	3.212

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure core machine (ICM-L20)

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
331128	Phenolic Urethane

Pollutant	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***	
	Phenolic Nobake	Phenolic Urethane	Phenolic Hotbox	Green Sand	Core Oil	Shell	Low Nitrogen Furan	Med Nitrogen Furan TSA Catalyst (Resin)	Furan Hotbox	Alkyd Isocyanate (Resin & Isocyanate)	Sodium Silicate & Ester (Sugar & Ester)	Pollutant Emissions	Pollutant Emissions
	(Resin)	(Resin)	(Resin)	(Seacoal)	(Core Oil)	(Resin)	(Resin)	(Resin)	(Resin)	(Resin)	(Resin)	(lbs/yr)	(tons/yr)
Acrolein	0.000005	0.000031	0.000009	0.000002	0.000077	0.000047	0.000028	0.000016	0.000013	0.000088	0.000028	10.265	0.005
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	1771.866	0.886
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	7.285	0.004
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	348.678	0.174
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	145.365	0.073
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	7.285	0.004
O-Xylene	0.000049	0.000132	0.000030	0.000021	0.000287	0.000117	0.000729	0.000040	0.000032	0.003838	0.000094	43.709	0.022
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	1292.724	0.646
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	275.830	0.138
Total Aromatic Amines	0.000049	0.000351	0.001275	0.000021	0.000096	0.002339	0.000081	0.000364	0.003032	0.000037	0.000094	116.226	0.058
Total C2 to C5 Aldehydes	0.003070	0.000219	0.000273	0.000063	0.000766	0.000585	0.000243	0.017004	0.000158	0.002156	0.001316	72.517	0.036
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	4091.086	2.046

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

**Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowits
Date: June 6, 2007**

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Scrap Charge Preheater	1.16	10.1616	0.010	0.039	0.003	0.508	0.028	0.427
Ladle heaters	2.60	22.776	0.022	0.087	0.007	1.139	0.063	0.957
Annealing Oven	3.20	28.032	0.027	0.107	0.008	1.402	0.077	1.177
Insignificant	4.00	35.04	0.033	0.133	0.011	1.752	0.096	1.472
Total	10.96	96.01	0.091	0.365	0.029	4.80	0.264	4.03

HAPs - Organics

Emission Factor in lb/MMcf	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	0.0021	0.0012	0.0750	1.8000	0.0034
Potential Emission in tons/yr	0.0001	0.0001	0.004	0.086	0.0002

HAPs - Metals

Emission Factor in lb/MMcf	Lead	Cadmium	Chromium	Manganese	Nickel	Total HAPs
	0.0005	0.0011	0.0014	0.0004	0.0021	
Potential Emission in tons/yr	0.00002	0.0001	0.0001	0.00002	0.0001	0.001

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

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowits
Date: June 6, 2007

Processes	PM (tons/yr)	PM-10 (tons/yr)	VOC (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	CO (tons/yr)
Scrap and Charge Handling	19.710	11.826	0.000	0.000	0.000	0.000
Melting (three (3) electric induction scrap iron furnaces and one (1) electric induction steel furnace)	26.061	24.878	0.000	0.000	0.000	0.000
Pouring/Casting	137.970	67.671	4.599	0.657	0.329	197.100
Cooling	45.990	45.990	0.000	0.000	0.000	0.000
Shakeout (CO included in pouring/cooling)	105.120	73.584	39.420	0.000	0.000	0.000
Cleaning and Finishing	74.460	7.446	0.000	0.000	0.000	0.000
One (1) mold sand handling system	292.834	292.834	0.000	0.000	0.000	0.000
North isocure core making process (CSH-North, ICM-1a, ICM-1b & ICM-1c)	43.362	6.504	54.203	0.000	0.000	0.000
Shell core making process (SCM and SSH-North)	31.536	4.730	13.140	0.000	0.000	0.000
One (1) air set core machine (ACM)	0.000	0.000	9.855	0.000	0.000	0.000
South isocure core making process (ICM-L20 and CSH-South)	23.652	3.548	29.565	0.000	0.000	0.000
One (1) core baking oven	29.569	29.582	0.012	0.001	16.644	0.184
Innoculation operations (Magnesium Treatment)	59.130	59.130	0.164	0.000	0.000	0.000
Preheater	0.010	0.039	0.028	0.003	0.508	0.427
Ladle Heaters	0.022	0.087	0.063	0.007	1.139	0.957
Annealing oven	0.027	0.107	0.077	0.008	1.402	1.177
Insignificant Combustion	0.033	0.133	0.096	0.011	1.752	1.472
Insignificant structural steel activities	0.010	0.010	0.000	0.000	0.000	0.000
Insignificant core wash	0.000	0.000	1.000	0.000	0.000	0.000
Insignificant parts washer	0.000	0.000	1.000	0.000	0.000	0.000
Insignificant woodworking	0.001	0.001	0.000	0.000	0.000	0.000
Insignificant material handling	7.000	7.000	0.000	0.000	0.000	0.000
Insignificant grinding and machining	1.000	1.000	0.000	0.000	0.000	0.000
Insignificant paved and unpaved roads	5.000	5.000	0.000	0.000	0.000	0.000
Insignificant maintenance welding, and cutting	1.500	1.500	0.000	0.000	0.000	0.000
Overall source total	897	636	153	0.687	21.8	201

Company Name: Manchester Metals, LLC
 Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
 Permit Number: T 169-23344-00019
 Reviewer: CarrieAnn Paukowitz
 Date: June 6, 2007

Processes	Chromium (tons/yr)	Cobalt (tons/yr)	Nickel (tons/yr)	Arsenic (tons/yr)	Cadmium (tons/yr)	Selenium (tons/yr)	Lead (tons/yr)	Manganese (tons/yr)	Benzene (tons/yr)	Dichloro-benzene (tons/yr)	Form-aldehyde (tons/yr)	Hexane (tons/yr)	Toluene (tons/yr)	MDI (tons/yr)	Methanol (tons/yr)	Phenol (tons/yr)	Acrolein (tons/yr)	Hydrogen Cyanide (tons/yr)	Xylenes (tons/yr)	Naphthalene (tons/yr)	Total Aromatic Amines (tons/yr)	Total C2 to C5 Aldehydes (tons/yr)	Total HAPs (tons/yr)		
Scrap and Charge Handling	0.008	0.001	0.013	0.003	0.001	0.0003	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.101	
Melting (three (3) electric induction scrap iron furnaces and one (1) electric induction steel furnace)	0.008	0.001	0.013	0.003	0.001	0.0003	0.296	0.739	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.060	
Pouring/Casting	0.053	0.004	0.092	0.018	0.008	0.001	0.531	0.000		0.000		0.000		0.000	0.000										
Cooling	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.748	0.000	0.031	0.000	1.955	0.000	0.000	2.888	0.042	6.121	0.660	0.044	1.427	0.500	16.926		
Shakeout (CO included in pouring/cooling)	0.040	0.003	0.070	0.014	0.006	0.001	0.405	0.000		0.000		0.000		0.000	0.000										
Cleaning and Finishing	0.028	0.002	0.050	0.010	0.004	0.001	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.115	
One (1) mold sand handling system	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
North isocure core making process (CSH-North, ICM-1a, ICM-1b & ICM-1c)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	2.605	0.044	0.217	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.868	
Shell core making process (SCM and SSH-North)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
One (1) air set core machine (ACM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.250	
South isocure core making process (ICM-L20 and CSH-South)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	1.421	0.015	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.511	
One (1) core baking oven	0.000003	0.000	0.000005	0.000	0.000002	0.000	0.000001	0.000001	0.000005	0.000003	0.0002	0.004	0.000007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	
Inoculation operations (Magnesium Treatment)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Preheater																									
Ladle Heaters																									
Annealing oven	0.0001	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001	0.0001	0.0036	0.0864	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.091	
Insignificant Combustion																									
Insignificant structural steel activities	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant core wash	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant parts washer	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant woodworking	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant material handling	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant grinding and machining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant paved and unpaved roads	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Insignificant maintenance welding, and cutting	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Total	0.136	0.011	0.239	0.047	0.022	0.004	1.327	0.739	6.75	0.0001	2.29	0.090	1.96	4.03	0.058	3.18	0.042	6.12	0.660	0.044	1.43	0.500	24.9		

Appendix A: Unrestricted Potential Emissions
By Equipment and Construction Date

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: June 6, 2007

This spreadsheet evaluates the emissions from individual units, based on construction date for rule applicability determinations, including 326 IAC 2-2 PSD applicability. Due to bottlenecks, the total of emissions from the individual processes is greater than the total potential emission from the source.

Construction Date	Processes	PM (tons/yr)	PM-10 (tons/yr)	VOC (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	CO (tons/yr)
Prior to August 7, 1977	Scrap and Charge Handling (a)	19.710	11.826	0.000	0.000	0.000	0.000
	Preheater (b)(1)	0.010	0.039	0.028	0.003	0.508	0.427
	Ladle Heaters (b)(4)	0.022	0.087	0.063	0.007	1.139	0.957
	Annealing oven (d)(6)	0.027	0.107	0.077	0.008	1.402	1.177
	Insignificant Combustion	0.033	0.133	0.096	0.011	1.752	1.472
	Pallet line and floor stations (b)(7)	24.528	15.155	0.613	0.088	0.044	26.280
	Shakeout (c)	105.120	73.584	39.420	0.000	0.000	197.100
	Casting cleaner shotblaster (CCL1) (d)(1)	74.460	7.446	0.000	0.000	0.000	0.000
	Casting cleaner shotblaster (CCL2) (d)(2)	223.380	22.338	0.000	0.000	0.000	0.000
	Shotblast cleaner (CCL3) (d)(3)	186.150	18.615	0.000	0.000	0.000	0.000
	One (1) mold sand handling system (e)(1)(A)	292.834	292.834	0.000	0.000	0.000	0.000
	One (1) core sand handling system (CSH-North)(e)(2)	43.362	6.504	0.000	0.000	0.000	0.000
	One (1) pallet molding operation (e)(1)(C)	0.000	0.000	0.000	0.000	0.000	0.000
	One (1) core baking oven (e)(6)	29.569	29.582	0.012	0.001	16.644	0.184
	Innoculation operations (Magnesium Treatment) (f)	59.130	59.130	0.164	0.000	0.000	0.000
	Insignificant woodworking	0.001	0.001	0.000	0.000	0.000	0.000
	Insignificant material handling	7.000	7.000	0.000	0.000	0.000	0.000
	Insignificant paved and unpaved roads	5.000	5.000	0.000	0.000	0.000	0.000
	Insignificant maintenance welding, and cutting	1.500	1.500	0.000	0.000	0.000	0.000
	Total		1072	551	40.5	0.118	21.5
1980	Two (2) isocure core machines (ICM-1a and ICM-1b) (e)(2)(B)(i)	0.000	0.000	39.420	0.000	0.000	0.000
	Pouring, cooling and shakeout HAPs due to ICM-1a and ICM-1b	0.000	0.000	0.000	0.000	0.000	0.000
	Insignificant grinding and machining	1.000	1.000	0.000	0.000	0.000	0.000
	Insignificant structural steel activities	0.010	0.010	0.000	0.000	0.000	0.000
	Insignificant core wash	0.000	0.000	1.000	0.000	0.000	0.000
	1980 total	1.01	1.01	40.4	0.00	0.00	0.00
1981	Shell core making process (e)(4) (SCM and SSH-North) (emissions did not increase with the addition of three (3) more machines in 2005)	31.536	4.730	13.140	0.000	0.000	0.000
	1981 total	31.5	4.73	13.1	0.00	0.00	0.00
1986	One (1) mold making line (e)(1)(B)	0.000	0.000	0.000	0.000	0.000	0.000
	Disaforma molding/pouring line (b)(6)	183.960	113.661	4.599	0.657	0.329	197.100
	1986 total	184	113.7	4.60	0.657	0.329	197
1987	One (1) muller (e)(1)(A)(ii)	292.834	292.834	0.000	0.000	0.000	0.000
	Insignificant parts washer	0.000	0.000	1.000	0.000	0.000	0.000
	1987 total	293	293	1.00	0.00	0.00	0.00
1993 and 1994	Seven (7) pedestal and two (2) dual wheel grinders (d)(4 and 5)	204.765	20.477	0.000	0.000	0.000	0.000
	One (1) mold making line (e)(1)(B)	0.000	0.000	0.000	0.000	0.000	0.000
	Disamatic molding/pouring line (b)(5)	122.640	75.774	3.066	0.438	0.219	131.400
	1993 and 1994 total	327	96.3	3.07	0.438	0.219	131
1995	Three (3) Electric Induction Scrap Iron Furnaces (b)(2)	25.623	24.484	0.000	0.000	0.000	0.000
	One (1) Electric Induction Steel Furnace (b)(3)	0.438	0.394	0.000	0.000	0.000	0.000
	1995 total	26.1	24.9	0.00	0.00	0.00	0.00
1997	One (1) air set core machine (ACM) (e)(5)	0.000	0.000	9.855	0.000	0.000	0.000
	1997 total	0.000	0.000	9.86	0.000	0.000	0.000
2005 and 2006	One (1) isocure core machine (ICM-1c) (e)(2)(B)(ii)	0.000	0.000	14.783	0.000	0.000	0.000
	One (1) isocure process (ICM-L20 and CSH-South) (e)(3)	23.652	3.548	29.565	0.000	0.000	0.000
	2005 and 2006 total	23.7	3.55	44.3	0.000	0.000	0.000

Appendix A: Limited Potential to Emit Calculations
By Equipment and Construction Date

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: June 6, 2007

This spreadsheet demonstrates the limited PTE for each individual unit and modification by construction date. Due to bottlenecks, the total PTE from the individual processes is greater than the total PTE from the source.

Construction Date	Processes	PM (tons/yr)	PM-10 (tons/yr)	VOC (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	CO (tons/yr)	Pollutant Limited (Rule)
Prior to August 7, 1977	Scrap and Charge Handling (a)	19.710	11.826	0.000	0.000	0.000	0.000	no limit
	Preheater (b)(1)	0.010	0.039	0.028	0.003	0.508	0.427	no limit
	Ladle Heaters (b)(4)	0.022	0.087	0.063	0.007	1.139	0.957	no limit
	Annealing oven (d)(6)	0.027	0.107	0.077	0.008	1.402	1.177	no limit
	Insignificant Combustion	0.033	0.133	0.096	0.011	1.752	1.472	no limit
	Pallet line and floor stations (b)(7)	24.528	15.155	0.613	0.088	0.044	26.280	no limit
	Shakeout (c)	105.120	73.584	39.420	0.000	0.000	197.100	no limit
	Casting cleaner shotblaster (CCL1) (d)(1)	18.000	7.446	0.000	0.000	0.000	0.000	PM (326 IAC 6-3-2)
	Casting cleaner shotblaster (CCL2) (d)(2)	37.500	22.338	0.000	0.000	0.000	0.000	PM (326 IAC 6-3-2)
	Shotblast cleaner (CCL3) (d)(3)	33.200	18.615	0.000	0.000	0.000	0.000	PM (326 IAC 6-3-2)
	One (1) mold sand handling system (e)(1)(A)	24.900	14.900	0.000	0.000	0.000	0.000	PM & PM10 w/ mulder (326 IAC 2-2)
	One (1) core sand handling system (CSH-North)(e)(2)	84.096	6.504	0.000	0.000	0.000	0.000	PM (326 IAC 6-3-2)
	One (1) pallet molding operation (e)(1)(C)	0.000	0.000	0.000	0.000	0.000	0.000	no limit
	One (1) core baking oven (e)(6)	29.569	29.582	0.012	0.001	16.644	0.184	no limit
	Innoculation operations (Magnesium Treatment) (f)	59.130	59.130	0.164	0.000	0.000	0.000	no limit
	Insignificant woodworking	4.380	4.380	0.000	0.000	0.000	0.000	no limit
	Insignificant material handling	7.000	7.000	0.000	0.000	0.000	0.000	no limit
	Insignificant paved and unpaved roads	5.000	5.000	0.000	0.000	0.000	0.000	no limit
	Insignificant maintenance welding, and cutting	1.500	1.500	0.000	0.000	0.000	0.000	no limit
	Total	454	277	40.5	0.118	21.5	228	
1980	Two (2) isocure core machines (ICM-1a and ICM-1b) (e)(2)(B)(i)	0.000	0.000	39.000	0.000	0.000	0.000	VOC (326 IAC 2-2)
	Pouring, cooling and shakeout HAPs due to ICM-1a and ICM-1b							no limit
	Insignificant grinding and machining	1.000	1.000	0.000	0.000	0.000	0.000	no limit
	Insignificant structural steel activities	0.010	0.010	0.000	0.000	0.000	0.000	no limit
	Insignificant core wash	0.000	0.000	1.000	0.000	0.000	0.000	no limit
1980 total	1.01	1.01	40.0	0.00	0.00	0.00		
1981	Shell core making process (e)(4) (SCM and SSH-North) (emissions did not increase with the addition of three (3) more machines in 2005)	24.966	4.730	13.140	0.000	0.000	0.000	PM (326 IAC 2-2)
	1981 total	25.0	4.73	13.1	0.00	0.00	0.00	
1986	One (1) mold making line (e)(1)(B)	0.000	0.000	0.000	0.000	0.000	0.000	no limit
	Disaforma molding/pouring line (b)(6)	24.800	14.96	4.599	0.657	0.329	35.500	PM, PM10 & CO (326 IAC 2-2)
	1986 total	24.8	14.96	4.60	0.657	0.329	35.5	
1987	One (1) mulder (e)(1)(A)(ii)	24.966	14.980	0.000	0.000	0.000	0.000	PM & PM10 w/ mold sand handling (326 IAC 2-2)
	Insignificant parts washer	0.000	0.000	1.000	0.000	0.000	0.000	no limit
	1987 total	25.0	14.98	1.00	0.00	0.00	0.00	
1993 and 1994	Seven (7) pedestal and two (2) dual wheel grinders (d)(4 and 5)	8.585	7.008	0.000	0.000	0.000	0.000	PM & PM10 (326 IAC 2-2)
	One (1) mold making line (e)(1)(B)	0.000	0.000	0.000	0.000	0.000	0.000	no limit
	Disamatic molding/pouring line (b)(5)	16.300	7.980	3.066	0.438	0.219	23.300	PM, PM10 & CO (326 IAC 2-2)
	1993 and 1994 total	24.9	14.99	3.07	0.438	0.219	23.3	
1995	Three (3) Electric Induction Scrap Iron Furnaces (b)(2)	15.700	14.900	0.000	0.000	0.000	0.000	PM & PM10 (326 IAC 2-2)
	One (1) Electric Induction Steel Furnace (b)(3)			0.000	0.000	0.000	0.000	
	1995 total	15.7	14.90	0.00	0.00	0.00	0.00	
1997	One (1) air set core machine (ACM) (e)(5)	0.000	0.000	9.855	0.000	0.000	0.000	no limit
	1997 total	0.00	0.00	9.86	0.00	0.00	0.00	
2005 and 2006	One (1) isocure core machine (ICM-1c) (e)(2)(B)(ii)	0.000	0.000	14.783	0.000	0.000	0.000	no limit
	One (1) isocure process (ICM-L20 and CSH-South) (e)(3)	23.652	3.548	24.835	0.000	0.000	0.000	VOC (326 IAC 8-1-6)
	2005 and 2006 total	23.7	3.55	39.6	0.000	0.000	0.000	

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Permit Number: T 169-23344-00019
Reviewer: CarrieAnn Paukowitz
Date: June 6, 2007

Processes	PM (tons/yr)	PM-10 (tons/yr)	VOC (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	CO (tons/yr)
Scrap and Charge Handling (a)	19.710	11.826	0.000	0.000	0.000	0.000
Melting (three (3) electric induction scrap iron furnaces and one (1) electric induction steel furnace)	15.700	14.900	0.000	0.000	0.000	0.000
<i>Disaforma molding/pouring line (b)(6)</i>	<i>24.800</i>	<i>14.960</i>				
<i>Disamatic molding/pouring line (b)(5)</i>	<i>16.300</i>	<i>7.980</i>				
<i>Pallet line and floor stations (b)(7)</i>	<i>24.528</i>	<i>15.155</i>				
Pouring/Casting Total			4.599	0.657	0.329	197.100
Cooling Total	65.628	38.095	0.000	0.000	0.000	0.000
Shakeout (c) (CO included in pouring/cooling)	105.120	73.584	39.420	0.000	0.000	0.000
Cleaning and Finishing (d) (1) - (5)	74.460	7.446	0.000	0.000	0.000	0.000
One (1) mold sand handling system (e)(1)(A)	24.966	14.980	0.000	0.000	0.000	0.000
North isocure core making process (CSH-North, ICM-1a, ICM-1b & ICM-1c)	84.096	6.504	53.783	0.000	0.000	0.000
Shell core making process (SCM and SSH-North)	24.966	4.730	13.140	0.000	0.000	0.000
One (1) air set core machine (ACM)	0.000	0.000	9.855	0.000	0.000	0.000
South isocure core making process (ICM-L20 and CSH-South)	23.652	3.548	24.835	0.000	0.000	0.000
One (1) core baking oven (e)(6)	29.569	29.582	0.012	0.001	16.644	0.184
Innoculation operations (Magnesium Treatment) (f)	59.130	59.130	0.164	0.000	0.000	0.000
Preheater (b)(1)	0.010	0.039	0.028	0.003	0.508	0.427
Ladle Heaters (b)(4)	0.022	0.087	0.063	0.007	1.139	0.957
Annealing oven (d)(6)	0.027	0.107	0.077	0.008	1.402	1.177
Insignificant Combustion	0.033	0.133	0.096	0.011	1.752	1.472
Insignificant structural steel activities	0.010	0.010	0.000	0.000	0.000	0.000
Insignificant core wash	0.000	0.000	1.000	0.000	0.000	0.000
Insignificant parts washer	0.000	0.000	1.000	0.000	0.000	0.000
Insignificant woodworking	0.001	0.001	0.000	0.000	0.000	0.000
Insignificant material handling	7.000	7.000	0.000	0.000	0.000	0.000
Insignificant grinding and machining	1.000	1.000	0.000	0.000	0.000	0.000
Insignificant paved and unpaved roads	5.000	5.000	0.000	0.000	0.000	0.000
Insignificant maintenance welding, and cutting	1.500	1.500	0.000	0.000	0.000	0.000
Overall source total	607	317	148	0.687	21.8	201

Methodology

The values are the maximum annual potential to emit of each type of process after the limitations in the permit, and considering the bottleneck due to the melting capacity (7.5 tons/hr)

The values in the table are equivalent to the unrestricted potential emissions, considering the bottleneck, except for the following:

The limitation that renders 326 IAC 2-2 not applicable to the mold sand handling operation limits the potential to emit of the mold sand handling.

326 IAC 6-3-2 limits PM emissions less than the unrestricted potential to emit for CSH-North.

The VOC limits that renders 326 IAC 2-2 not applicable to ICM-1a, ICM-1b and ICM-L20 limit the potential to emit of VOC from those units. As a result, the PTE of HAPs is also limited (see next page).

The limits that render 326 IAC 2-2 not applicable to the pouring, casting and cooling operations limit the potential to emit PM and PM10 from the total of those units.

The limits that render 326 IAC 2-2 not applicable to the electric induction furnaces limit the potential to emit PM and PM10 from those units.

The annual potential emissions from the cleaning and finishing after the bottleneck is less than the annual equivalent of the 326 IAC 6-3-2 limit. Thus, the value in this table represents the unrestricted potential emissions.

Company Name: Manchester Metals, LLC
 Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
 Permit Number: T 169-23344-0019
 Reviewer: CarrieAnn Paukowits
 Date: May 18, 2007

Processes	Chromium (tons/yr)	Cobalt (tons/yr)	Nickel (tons/yr)	Arsenic (tons/yr)	Cadmium (tons/yr)	Selenium (tons/yr)	Lead (tons/yr)	Manganese (tons/yr)	Benzene (tons/yr)	Dichloro- benzene (tons/yr)	Form- aldehyde (tons/yr)	Hexane (tons/yr)	Toluene (tons/yr)	MDI (tons/yr)	Methanol (tons/yr)	Phenol (tons/yr)	Acrolein (tons/yr)	Hydrogen Cyanide (tons/yr)	Xylenes (tons/yr)	Naph- thalene (tons/yr)	Total Aromatic Amines (tons/yr)	Total C2 to C5 Aldehydes (tons/yr)	Total HAPs (tons/yr)	
Scrap and Charge Handling (a)	0.008	0.001	0.013	0.003	0.001	0.0003	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.101
Melting (three (3) electric induction scrap iron furnaces and one (1) electric induction steel furnace)	0.008	0.001	0.013	0.003	0.001	0.000	0.296	0.739	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.060
<i>Disaforma molding/pouring line (b)(6)</i>																								
<i>Disamatic molding/pouring line (b)(5)</i>																								
<i>Pallet line and floor stations (b)(7)</i>																								
Pouring/Casting Total	0.053	0.004	0.092	0.018	0.008	0.001	0.531	0.000		0.000				0.000	0.000									
Cooling Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.748	0.000	0.031		1.955			2.888	0.042	6.121	0.660	0.044	1.427	0.500	16.926	
Shakeout (c) (CO included in pouring/cooling)	0.040	0.003	0.070	0.014	0.006	0.001	0.405	0.000		0.000				0.000	0.000									
Cleaning and Finishing (d) (1) - (5)	0.028	0.002	0.050	0.010	0.004	0.001	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.115
One (1) mold sand handling system (e)(1)(A)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
North isocure core making process (CSH-North, ICM-1a, ICM-1b & ICM-1c)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	2.605	0.044	0.217	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.868
Shell core making process (SCM and SSH-North)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
One (1) air set core machine (ACM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.250
South isocure core making process (ICM-L20 and CSH-South)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	1.421	0.015	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.511
One (1) core baking oven (e)(6)	0.000003	0.0000	0.000005	0.0000	0.000002	0.0000	0.000001	0.000001	0.000005	0.000003	0.0002	0.0039	0.00001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
Innoculation operations (Magnesium Treatment) (f)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Preheater (b)(1)																								
Ladle Heaters (b)(4)	0.0001	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001	0.0001	0.0036	0.0864	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.091
Annealing oven (d)(6)																								
Insignificant Combustion																								
Insignificant structural steel activities	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant core wash	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant parts washer	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant woodworking	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant material handling	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant grinding and machining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant paved and unpaved roads	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant maintenance welding, and cutting	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.136	0.011	0.239	0.047	0.022	0.004	1.33	0.739	6.75	0.000	2.29	0.090	1.96	4.03	0.058	3.18	0.042	6.12	0.660	0.044	1.43	0.500	24.9	