



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: October 25, 2006

RE: Manchester Metals / 169-23066-00019

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 according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.in.gov/idem

Mr. David L. Boyd
Manchester Metals, LLC
P.O. Box 345
North Manchester, IN 46962-0345

October 25, 2006

Re: **169-23066-00019**
Significant Source Modification to:
Part 70 Operating Permit No.: **T 169-9014-00019**

Dear Mr. Boyd:

Manchester Metals, LLC was issued Part 70 Operating Permit T 169-9014-00019 on May 14, 2002, for a stationary gray iron and steel foundry source located at 205 Wabash Road, North Manchester, Indiana 46962. An application to modify the source was received on May 9, 2006. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (a) One (1) isocure process, constructed in 2005, identified as ICM-1c, capacity: 0.75 tons of sand per hour, 22.5 pounds of isocure per hour, and 2.25 pounds of catalyst (Dimethylethylamine) per hour.
- (b) One (1) isocure process, constructed in 2006, identified as L-20, including a sand handling operation and an isocure core machine, identified as ICM-2, with catalyst emissions controlled by a fume scrubber, exhausting to stack LA-1, capacity: 1.5 tons of sand per hour, 45 pounds of resin per hour, and 4.5 pounds of non-HAP catalyst per hour.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact CarrieAnn Paukowits, c/o OAQ, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251, at 631-691-3395, ext. 18 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original Signed By:
Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

CAP/MES

Attachments

cc: File - Wabash County
Wabash County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Branch
Administrative and Development Section
Technical Support and Modeling - Michele Boner
WD Gabbard, Gabbard Environmental Services, Inc.



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.in.gov/idem

**PART 70 SIGNIFICANT SOURCE MODIFICATION
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.

Operation Permit No.: T 169-9014-00019	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: May 14, 2002 Expiration Date: May 14, 2007

First Significant Source Modification No.: 169-23066-00019	Sections/Conditions Affected: A.2, D.4, and six (6) quarterly report forms (3 modified and 3 added)
Issued by: Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: October 25, 2006

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, not exhausting through a stack, maximum rated 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, 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, some emissions controlled by the general ventilation baghouse DC1, and exiting through the general building exhaust and at stack S1, maximum charge rate: 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, part of operation MP, constructed in 1993, with no controls on emissions and the emissions are exhausted via the production building general ventilation, 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, part of operation MP, constructed in 1986, with no controls on emissions and the emissions are exhausted via the production building general ventilation, 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, part of operation MP, constructed prior to 1973, with no controls on emissions and the emissions are exhausted via the production building general ventilation, 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 PM and PM₁₀ 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 PM and PM₁₀ 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 PM and PM₁₀ 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 PM and PM₁₀ 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) One (1) sand handling process consisting of the following emission units and pollution control devices:
- (1) One (1) muller, constructed in 1987, identified as SH, with PM and PM₁₀ emissions controlled by baghouse DC3 and exhausting through stack S6 or S6R, maximum capacity: 100 tons of sand per hour.
 - (2) One (1) mold sand handling system, constructed in 1965, identified as MSH, with PM and PM₁₀ emissions controlled by baghouse DC3 and exhausting through stack S6, maximum capacity: 50 tons of sand per hour.
 - (3) One (1) core sand handling system, constructed in 1970, identified as CSH, exhausting through stack I3 with some particulate exhausting through small filters, capacity: 50 tons of sand per hour.
- (f) One (1) core and mold preparation process consisting of the following emission units and pollution control devices:
- (1) Two (2) mold making lines, identified as DM1, one constructed in 1986 with a capacity of 60 tons of sand per hour and one constructed in 1993 with a capacity of 30 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (2) One (1) pallet molding operation, constructed in 1965, capacity: 5 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (3) Ten (10) shell core making machines, seven (7) constructed in 1981 and three (3) constructed in 2005, identified as SCM, capacity: 2.0 tons of pre-mixed sand per hour, total.

- (4) One (1) air set core machine, constructed in 1997, identified as ACM, capacity: 1.5 tons of sand, 3.91 pounds of alphaset and 1.30 pounds of alphacure per hour.
- (5) One (1) isocure operation, identified as ICM-1, with catalyst emissions controlled by a fume scrubber, exhausting through stack S8, including the following:
 - (A) Two (2) isocure processes, constructed in 1980, identified as ICM-1a and ICM-1b, capacity: 1.0 ton of sand per hour, 30 pounds of resin per hour, and 3 pounds of catalyst (Dimethylethylamine) per hour, each.
 - (B) One (1) isocure process, constructed in 2005, identified as ICM-1c, capacity: 0.75 tons of sand per hour, 22.5 pounds of isocure per hour, and 2.25 pounds of catalyst (Dimethylethylamine) per hour.
- (6) One (1) isocure process, constructed in 2006, identified as L-20, including a sand handling operation and an isocure core machine, identified as ICM-2, with catalyst emissions controlled by a fume scrubber, exhausting to stack LA-1, capacity: 1.5 tons of sand per hour, 45 pounds of resin per hour, and 4.5 pounds of non-HAP catalyst per hour.
- (7) 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.
- (g) Inoculation operations, operating since approximately 1973, 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, capacity: 10 tons of metal per hour.

SECTION D.4 FACILITY OPERATION CONDITIONS

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

- (e) One (1) sand handling process consisting of the following emission units and pollution control devices:
 - (1) One (1) muller, constructed in 1987, identified as SH, with PM and PM₁₀ emissions controlled by baghouse DC3 and exhausting through stack S6 or S6R, maximum capacity: 100 tons of sand per hour.
 - (2) One (1) mold sand handling system, constructed in 1965, identified as MSH, with PM and PM₁₀ emissions controlled by baghouse DC3 and exhausting through stack S6, maximum capacity: 50 tons of sand per hour.
 - (3) One (1) core sand handling system, constructed in 1970, identified as CSH, exhausting through stack I3 with some particulate exhausting through small filters, capacity: 50 tons of sand per hour.

- (f) One (1) core and mold preparation process consisting of the following emission units and pollution control devices:
 - (1) Two (2) mold making lines, identified as DM1, one constructed in 1986 with a capacity of 60 tons of sand per hour and one constructed in 1993 with a capacity of 30 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (2) One (1) pallet molding operation, constructed in 1965, capacity: 5 tons of sand per hour. Only sand, clay and water are used in the mold making operation.
 - (3) Ten (10) shell core making machines, seven (7) constructed in 1981 and three (3) constructed in 2005, identified as SCM, capacity: 2.0 tons of pre-mixed sand per hour, total.
 - (4) One (1) air set core machine, constructed in 1997, identified as ACM, capacity: 1.5 tons of sand, 3.91 pounds of alphaset and 1.30 pounds of alphacure per hour.
 - (5) One (1) isocure operation, identified as ICM-1, with catalyst emissions controlled by a fume scrubber, exhausting through stack S8, including the following:
 - (A) Two (2) isocure processes, constructed in 1980, identified as ICM-1a and ICM-1b, capacity: 1.0 ton of sand per hour, 30 pounds of resin per hour, and 3 pounds of catalyst (Dimethylethylamine) per hour, each.
 - (B) One (1) isocure process, constructed in 2005, identified as ICM-1c, capacity: 0.75 tons of sand per hour, 22.5 pounds of isocure per hour, and 2.25 pounds of catalyst (Dimethylethylamine) per hour.
 - (6) One (1) isocure process, constructed in 2006, identified as L-20, including a sand handling operation and an isocure core machine, identified as ICM-2, with catalyst emissions controlled by a fume scrubber, exhausting to stack LA-1, capacity: 1.5 tons of sand per hour, 45 pounds of resin per hour, and 4.5 pounds of non-HAP catalyst per hour.
 - (7) 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 one (1) muller (SH) and mold sand handling (MSH), 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 (CSH) shall not exceed 44.6 pounds per hour, when operating at a process weight rate of 50 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 one (1) isocure process, identified as L-20, sand handling operation shall not exceed 5.4 pounds per hour when operating at a process weight rate of 1.5 tons of sand per hour.

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

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:

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

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:

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

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

- (a) Any change or modification that increases the potential to emit VOC from any of the seven (7) shell core making machines to 25 tons per year or more, shall cause that facility to become subject to the requirements of 326 IAC 8-1-6, and shall require prior IDEM, OAQ approval.
- (b) Any change or modification that increases the potential to emit VOC from the one (1) airset core machine to 25 tons per year or more, shall cause that facility to become subject to the requirements of 326 IAC 8-1-6, and shall require prior IDEM, OAQ approval.
- (c) Any change or modification that increases the potential to emit VOC from either of the two (2) mold making lines or the pallet molding line to 25 tons per year or more, shall cause that facility to become subject to the requirements of 326 IAC 8-1-6, and shall require prior IDEM, OAQ approval.
- (d) 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 processes, identified as ICM-1a and ICM-1b, constructed in 1980:
 - (1) The resin usage for each isocure process 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 processes 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.

- (e) 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 process, identified as L-20 (including ICM-2):

- (1) The resin usage for the isocure process 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 process shall not exceed 0.05 pound per pound of resin before controls.

D.4.3 PSD Minor Modification Limit [326 IAC 2-2]

- (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.

- (b) Any change or modification that increases the potential to emit VOC from the seven (7) shell core making machines, constructed in 1981, to 40 tons per year or more shall cause the seven (7) shell core making machines to become subject to 326 IAC 2-2, PSD, and shall require prior IDEM, OAQ, approval.
- (c) Any change or modification that increases the potential to emit VOC from the one (1) mold making line, constructed in 1986, to 40 tons per year or more shall cause the one (1) mold making line to become subject to 326 IAC 2-2, PSD, and shall require prior IDEM, OAQ, approval.
- (d) Any change or modification that increases the potential to emit VOC from the one (1) air set core machine, constructed in 1997, to 40 tons per year or more shall cause the one (1) air set core machine to become subject to 326 IAC 2-2, PSD, and shall require prior IDEM, OAQ, approval.

- (e) Any change or modification that increases the potential to emit VOC from either of the two (2) mold making lines or the pallet molding line to 40 tons per year or more shall cause the line to become subject to 326 IAC 2-2, PSD, and shall require prior IDEM, OAQ, approval.
- (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 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.
- (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.

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 muller, mold sand handling, and core sand handling and their control devices, the three (3) isocure processes, identified as ICM-1, and the one (1) isocure process, identified as L-20 (including ICM-2).

Compliance Determination Requirements

D.4.5 Particulate Control (PM and PM₁₀) [326 IAC 2-7-6(6)]

- (a) In order to demonstrate compliance with Condition D.4.1 and D.4.3, the baghouse (DC3) shall be in operation at all times and control emissions from the muller and mold sand handling at all times when the muller and/or mold sand handling is in operation.
- (b) In order to demonstrate compliance with Condition D.4.1, the small dust collectors shall be in operation at all times and control emissions from the core sand handling operations at all times when the core sand handling is in operation.
- (c) In the event that bag or filter failure is observed in a multi-compartment baghouse or dust collector, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.4.6 VOC Emissions

Compliance with Conditions D.4.3(a) and (e) and D.4.2(d) and (e) shall be determined within thirty (30) days of the end of each month based on the total volatile organic compound usage for the previous twelve (12) month period.

D.4.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, in order to demonstrate compliance with Condition D.4.3, the Permittee shall perform PM and PM₁₀ testing to verify that the muller is in compliance with Condition D.4.3(f), utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀.

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

D.4.8 Visible Emissions Notations

- (a) Visible emission notations of the muller and mold sand handling baghouse stack exhaust (DC3) and small filters controlling the core sand handling 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.4.9 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 (DC3) used in conjunction with the muller and mold sand handling, 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 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.4.10 Broken or Failed Bag 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 line. 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 or dust collector's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.4.11 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] [326 IAC 2-2]

- (a) To document compliance with Conditions D.4.3(a) and (e) and D.4.2(d) and (e), the Permittee shall maintain records of the catalyst and resin usage at each of the three (3) isocure processes, identified as ICM-1, and the one (1) isocure process, identified as L-20 (including ICM-2), for each month.
- (b) To document compliance with Conditions D.4.3(a) and (e) and D.4.2(d) and (e), the Permittee shall maintain records of the VOC content of binders used at each of the isocure processes each month.
- (c) To document compliance with Condition D.4.8, the Permittee shall maintain records of visible emission notations of the muller and mold sand handling baghouse (DC3) stack and the small filters controlling the core sand handling exhausts once per day.
- (d) To document compliance with Condition D.4.9, the Permittee shall maintain the following:
 - (1) Records of the pressure drop for the baghouses during normal operation when venting to the atmosphere once per day.
 - (2) Documentation of the dates vents are redirected.
- (e) 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 SH, MSH, and CSH; two (2) mold making lines, identified as DM1; one (1) pallet molding operation; 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 processes, 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.
- (f) 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.4.3(a) and (e) and D.4.2(d) and (e), shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**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 169-9014-00019
 Facilities: Two (2) isocure processes, identified as ICM-1a and ICM-1b
 Parameter: Resin Usage
 Limit: No more than 330,000 pounds per twelve (12) consecutive month period, each, and no more than 532,000 pounds per twelve (12) consecutive month period, total, with compliance determined at the end of each month

YEAR: _____

Month	Resin Usage at ICM-1a (lbs)	Resin Usage at ICM-1b (lbs)	Total Resin Usage (lbs)	Resin Usage at ICM-1a (lbs)	Resin Usage at ICM-1b (lbs)	Total Resin Usage (lbs)	Resin Usage at ICM-1a (lbs)	Resin Usage at ICM-1b (lbs)	Total Resin Usage (lbs)
	This Month			Previous 11 Months			12 Month Total		

- 9 No deviation occurred in this month.
- 9 Deviation/s occurred in this month.
 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 169-9014-00019
 Facilities: Two (2) isocure processes, identified as ICM-1a and ICM-1b
 Parameter: Catalyst (DMEA) Usage
 Limit: No more than 33,000 pounds per twelve (12) consecutive month period, each, and no more than 53,200 pounds per twelve (12) consecutive month period, total, with compliance determined at the end of each month

YEAR: _____

Month	DMEA Usage at ICM-1a (lbs)	DMEA Usage at ICM-1b (lbs)	Total DMEA Usage (lbs)	DMEA Usage at ICM-1a (lbs)	DMEA Usage at ICM-1b (lbs)	Total DMEA Usage (lbs)	DMEA Usage at ICM-1a (lbs)	DMEA Usage at ICM-1b (lbs)	Total DMEA Usage (lbs)
	This Month			Previous 11 Months			12 Month Total		

- 9 No deviation occurred in this month.
- 9 Deviation/s occurred in this month.
 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 169-9014-00019
Facility: One (1) isocure process, identified as L-20 (including ICM-2)
Parameter: Resin Usage
Limit: more than 311,128 pounds per twelve (12) consecutive 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

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

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 169-9014-00019
Facility: One (1) isocure process, identified as L-20 (including ICM-2)
Parameter: Catalyst Usage
Limit: No more than 33,113 pounds per twelve (12) consecutive 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

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

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 169-9014-00019
Facility: One (1) isocure process, identified as ICM-1c
Parameter: Catalyst Usage
Limit: No more than 197,100 pounds per twelve (12) consecutive 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

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

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 169-9014-00019
Facility: One (1) isocure process, identified as ICM-1c
Parameter: Catalyst Usage
Limit: No more than 19,710 pounds per twelve (12) consecutive 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

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Company Name: Manchester Metals, LLC
Address City IN Zip: 205 Wabash Road, North Manchester, Indiana 46962
Source Modification No.: 169-23066-00019
Permit Modification No.: 169-23221-00019
Reviewer: CarrieAnn Paukowits
Application Date: May 9, 2006

Isocure Core Making Process

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)	Potential VOC Emissions from resin evap (tons/yr)	Potential VOC Emissions from Catalyst usage (tons/yr)	Total Potential VOC Emissions (tons/yr)
ICM-1c (part of ICM-1)	2005	0.75	1.5%	1.5	3.00	4.93	9.86	14.8
ICM-2 (part of L-20)	2006	1.5	1.5%	1.5	3.00	9.86	19.7	29.6
Total							29.6	44.3

Machine	Date of Construction	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Percent Part 1 Resin	Percent Part 2 Resin	Weight % MDI	Weight % Naphthalene	Weight % Phenol	Weight % Formaldehyde	MDI Emissions (tons/yr)	Naphthalene Emissions (tons/yr)	Phenol Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Total HAP Emissions (tons/yr)
ICM-1c (part of ICM-1)	2005	1.5	49%	51%	20.02%	1.01%	3.24%	7.89%	0.225	0.011	0.036	0.089	0.362
ICM-2 (part of L-20)	2006	1.5	49%	51%	20.02%	1.01%	3.24%	7.89%	0.450	0.023	0.073	0.178	0.724
Total									0.676	0.034	0.109	0.266	1.09

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-2 (part of L-20)	331128	0.05	8.28	33,113	1.00	16.56	24.8

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

For MM5, VOC Resin Emission Factor (lb VOC/lb Resin) = VOC Emission Factor from Resin (lb VOC/ton cores) x tons cores/hr x 1/(tons cores/hr x maximum resin content) x 1 ton/2,000 lbs

Process:	Rate (tons sand/hr)	Pollutant	Emission Factor (lb/ton produced)	PTE (lbs/hr)	PTE (tons/yr)
L-20	1.5	PM	3.6	5.40	23.7
Sand Handling for ICM-2		PM-10	0.54	0.810	3.55
Source of Criteria					
Pollutant Factors:					
FIRE 6.01					
EPA SCC# 3-04-003-5C					