Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

To:	Interested Parties
Date:	July 18, 2016
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Manchester Metals LLC
Permit Level:	Title V – Significant Permit Modification
Permit Number:	169-37096-00019
Source Location:	205 Wabash Road North Manchester, Indiana 46962
Type of Action Taken:	Modification at an existing source

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 matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 37096.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification 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.

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit 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 impractible 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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Commissioner

Mr. David Boyd
Manchester Metals, LLC
205 Wabash Road
North Manchester, IN 46962

July 18, 2016

Re: T 169-37096-00019
Significant Permit Modification to
Part 70 Renewal No.: T 169-31172-00019

Dear Mr. Boyd:

Manchester Metals, LLC was issued Part 70 Operating Permit Renewal No. T169-31172-00019 on July 5, 2012 for a stationary gray and ductile iron foundry located at 205 Wabash Road, North Manchester, Indiana. An application requesting changes to this permit was received on March 7, 2016. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified. The permit references the below listed attachments. Since this attachment has been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of this attachment with this modification:

Attachment A: 40 CFR 63, Subpart ZZZZZ, NESHAP for Iron and Steel Foundries Area Sources

Previously issued approvals for this source containing this attachment is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions on this matter, please contact Ms. Renee Traivaranon of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Renee Traivaranon or extension 4-5615 or dial (317) 234-5615.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document
cc: File - Wabash County
Wabash County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch

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Commissioner

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 construct 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.: T169-31172-00019	
Issued by: *original Signed by:* Tripurari P. Sinha, Ph. D. Section Chief Permits Branch Office of Air Quality	Issuance Date: July 5, 2012 Expiration Date: July 5, 2017

Administrative Amendment No.: 169-32116-00019, issued on July 25, 2012
Significant Permit Modification No: 169-32908-00019, issued on July 10, 2013
Significant Permit Modification No.: 169-33410-00019, issued on October 8, 2013
Administrative Amendment No.: 169-36112-00019, issued October 8, 2015

Significant Permit Modification No.:169-37096-00019	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: July18,2016 Expiration Date: July 5, 2017

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY 6

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

SECTION B GENERAL CONDITIONS 10

B.1 Definitions [326 IAC 2-7-1]
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)]
B.3 Term of Conditions [326 IAC 2-1.1-9.5]
B.4 Enforceability [326 IAC 2-7-7][IC 13-17-12]
B.5 Severability [326 IAC 2-7-5(5)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]
B.11 Emergency Provisions [326 IAC 2-7-16]
B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]
B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]
B.15 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]
B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]
B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]
B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]
B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
B.23 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

SECTION C SOURCE OPERATION CONDITIONS 21

Emission Limitations and Standards [326 IAC 2-7-5(1)] 21

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]
C.2 Opacity [326 IAC 5-1]
C.3 Open Burning [326 IAC 4-1][IC 13-17-9]
C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]
C.5 Fugitive Dust Emissions [326 IAC 6-4]
C.6 Stack Height [326 IAC 1-7]
C.7 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]
C.8 Performance Testing [326 IAC 3-6]
C.9 Compliance Requirements [326 IAC 2-1.1-11]
C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]
C.11 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] 24

C.12 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]
C.13 Risk Management Plan [326 IAC 2-7-5(12)][40 CFR 68]

C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]
C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] 27
C.16 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]
C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-2][326 IAC 2-3]
C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3][40 CFR 64][326 IAC 3-8]

Stratospheric Ozone Protection 30
C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS 31

Emission Limitations and Standards [326 IAC 2-7-5(1)] 31
D.1.1 Particulate [326 IAC 6-3-2]
D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

SECTION D.2 FACILITY OPERATION CONDITIONS 32

Emission Limitations and Standards [326 IAC 2-7-5(1)] 32

D.2.1 PSD Minor Limit [326 IAC 2-2][326 IAC 6-3-2]
D.2.2 Particulate [326 IAC 6-3-2]
D.2.3 HAPs Minor Limit [40 CFR 63]
D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] 35
D.2.5 Visible Emissions Notations

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)][326 IAC 2-7-19] 35
D.2.6 Record Keeping Requirements
D.2.7 Reporting Requirements

SECTION D.3 FACILITY OPERATION CONDITIONS 36

Emission Limitations and Standards [326 IAC 2-7-5(1)] 36
D.3.1 PSD Minor Limit [326 IAC 2-2]
D.3.2 PSD Minor Limit [326 IAC 2-2]
D.3.3 Particulate [326 IAC 6-3-2]
D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] 37
D.3.5 Particulate Control [326 IAC 2-7-6(6)]
D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
D.3.7 Broken or Failed Bag Detection

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] 38
D.3.8 Visible Emissions Notations
D.3.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)][326 IAC 2-7-19] 39
D.3.10 Record Keeping Requirements

SECTION D.4 FACILITY OPERATION CONDITIONS 40

Emission Limitations and Standards [326 IAC 2-7-5(1)] 41
D.4.1 PSD Minor Limit [326 IAC 2-2]
D.4.2 PSD Minor Limit [326 IAC 2-2]
D.4.3 PSD Minor Limit [326 IAC 2-2]

D.4.4 Particulate [326 IAC 6-3-2]
D.4.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
D.4.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] 44
D.4.7 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
D.4.8 Particulate Control [326 IAC 2-7-6(6)]
D.4.9 Broken or Failed Bag or Filter Detection

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] 45
D.4.10 Visible Emissions Notations [40 CFR 64]
D.4.11 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)][40 CFR 64]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)][326 IAC 2-7-19] 46
D.4.12 Record Keeping Requirements
D.4.13 Reporting Requirements

SECTION D.5 FACILITY CONDITIONS 47

Emission Limitations and Standards [326 IAC 2-7-5(1)] 47
D.5.1 Particulate [326 IAC 6-3-2]
D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

SECTION D.6 FACILITY OPERATION CONDITIONS 48

Emission Limitations and Standards [326 IAC 2-7-5(1)] 48
D.6.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
D.6.2 Particulate Emission Limitations [326 IAC 6-3-2]

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS 50

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)] 50
E.1.1 General Provisions Relating to Hazardous Air Pollutants [326 IAC 20-1][40 CFR Part 63, Subpart A]
E.1.2 National Emission Standards for Hazardous Air Pollutants for Source Category: Iron and Steel Foundries [326 IAC 20-1][40 CFR Part 63, Subpart ZZZZZ]

CERTIFICATION 51

EMERGENCY OCCURRENCE REPORT 52

Part 70 Quarterly Report 54

Part 70 Quarterly Report 55

Part 70 Quarterly Report 56

Part 70 Quarterly Report 57

Part 70 Quarterly Report 58

Part 70 Quarterly Report 59

Part 70 Quarterly Report 60

Part 70 Quarterly Report 61

Part 70 Quarterly Report 62

Part 70 Quarterly Report 63

Part 70 Quarterly Report 64

Part 70 Quarterly Report 65

Part 70 Quarterly Report 66

Part 70 Quarterly Report **67**

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT **68**

Attachment A - NESHAP, Subpart ZZZZZ

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(14)][326 IAC 2-7-1(22)]

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

Source Address:	205 Wabash Road, North Manchester, Indiana 46962
General Source Phone Number:	(260) 982-2191
SIC Code:	3321 (Gray and Ductile Iron Foundries)
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) 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.

(4) 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.

(5) One (1) molding, pouring and cooling line, identified as the Disaforma molding/ pouring line, constructed in 1986 and permitted in 2015 to add an automated pouring ladle and remove the two (2) existing manual ladles, with no controls on

emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 60 tons of molding sand and 20 tons of metal per hour.

(6) 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 voluntary 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) Sinto casting cleaner shotblaster, constructed in 2012, identified as CCL2, with emissions controlled by baghouse DC6, exhausting inside the building, and with maximum capacity of 6 tons of castings per hour.

(2) One (1) Wheelbrator shot blast cleaner, constructed in 1968, identified as CCL1, with PM and PM_{10} emissions controlled by baghouse DC5 and exhausting through stack S4, maximum capacity: 1 tons of castings per hour.

(3) 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 PM_{10} emissions from all of the grinders controlled by baghouse DC6 and exhausting inside the building, maximum throughput: 0.25 ton of castings per hour, each.

(4) Two (2) dual wheel grinders, constructed in 1993, identified as GR3 and GR4, with emissions from both grinders controlled by baghouse DC6 and exhausting inside the building, maximum throughput: 0.5 ton of castings per hour, each.

(5) One (1) semi-automatic grinder, constructred in 2016, identified as Maus 300, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

(6) One (1) semi-automatic grinder, approved in 2016 for construction, identified as Maus 600, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

(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, approved in 2013 for construction, 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 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 machine, approved in 2010 for construction, identified as ICM-L10(1), maximum capacity: 1.5 ton of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of catalyst (Dimethylethylamine) per hour, with catalyst emissions controlled by a voluntary fume scrubber, exhausting through stack S8.

(C) 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.

(D) One (1) isocure core machine, constructed in 2006, identified as ICM-L20(1), with catalyst emissions controlled by a voluntary fume scrubber, exhausting to stack LA-1, maximum capacity: 1.5 tons of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of non-HAP catalyst per hour.

(E) One (1) isocure core machine, permitted in 2011, identified as ICM-L10(II), maximum capacity: 1.5 ton of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of catalyst (Dimethylethylamine) per hour, with catalyst emissions controlled by a voluntary fume scrubber, exhausting through stack S8.

(F) One (1) isocure core machine, approved in 2011 for construction, identified as ICM-L20(II), maximum capacity: 1.5 ton of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of catalyst (Dimethylethylamine) per hour, with catalyst emissions controlled by a voluntary fume scrubber, exhausting through stack LA2.

(3) 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) Eight (8) shell core making machines, five (5) 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.

(4) 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.

(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(14)]

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) 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.

(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. [326 IAC 6-3-2]
(2) Using 80 tons or less of welding consumables. [326 IAC 6-3-2]

(d) Other activities or categories not previously identified with potential, uncontrolled emissions equal to or less than insignificant activity thresholds:

(1) Pattern Shop woodworking activities, constructed in 1973, equipped with a sock filter. [326 IAC 6-3-2]

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T169-31172-00019, 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][IC 13-17-12]

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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) 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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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)(8) 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T169-31172-00019 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 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.16 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.18 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 or notice 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.19 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) or (c) 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). 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) and (c)(1).

(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 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.22 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.23 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.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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.

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

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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

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

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

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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)][40 CFR 64][326 IAC 3-8]

(a) Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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.

(b) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(c) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 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. The analog instrument shall be capable of measuring values outside of the normal range.

(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.12 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]

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

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

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 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.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]

(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

(a) The Permittee shall take reasonable response steps to 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 excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning 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 normal or usual manner of operation.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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. 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). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or 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.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.16 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]

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(33) ("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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.17 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. Support information includes the following where applicable:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

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

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability

Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

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

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

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3][40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

(d) 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.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) 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 (ww) and/or 326 IAC 2-3-1 (pp), 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).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

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

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

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

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

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

(g) 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.19 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 applicable standards for recycling and emissions reduction.

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:

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

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility. Section B - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

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) 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.

(4) 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.

(5) One (1) molding, pouring and cooling line, identified as the Disaforma molding/ pouring line, constructed in 1986 and permitted in 2015 to add an automated pouring ladle and remove the two (2) existing manual ladles, with no controls on emissions and the emissions are exhausted via the production building general ventilation, maximum capacity: 60 tons of molding sand and 20 tons of metal per hour.

(6) 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 voluntary 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 PSD Minor Limit [326 IAC 2-2][326 IAC 6-3-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

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

(1) The throughput of metal at the pouring and cooling operations at the one (1) Disaforma molding/pouring line shall be less than 16,665 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The total uncontrolled PM emission rate from the pouring and cooling operations shall not exceed 3.0 pounds per ton of metal throughput.

(3) The total uncontrolled PM10 emission rate from the pouring and cooling operations shall not exceed 1.8 pounds per ton of metal throughput.

(4) The total uncontrolled 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, PM_{10}, and CO 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 to the 1986 modification.

These limitations in conjunction with the 2015 Actual to Projected Actual (ATPA) test under 326 IAC 2-2-2(d)(3), rendered the 2015 modification a minor modification to an existing major source. Therefore, the requirements of 326 IAC 2-2, PSD, are not applicable to the 2015 modification.

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

(1) 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) The PM emission rate from the pouring operation 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.

(3) The PM and PM_{10} emission rates from the cooling operation shall not exceed 1.4 pounds per ton of metal throughput.

(4) 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, PM_{10} 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 to the 1993/1994 modification.

(c) The Permittee shall comply with the following limitations for the three (3) electric induction furnaces, IF1 through IF3:

(1) The iron throughput to the total of the three (3) electric induction furnaces, IF1 through IF3, shall be less than 34,700 tons per consecutive twelve (12) month period, with compliance determined at the end of each month.

(2) The PM emissions shall not exceed 0.9 pound per ton when melting iron and the PM_{10} emissions shall not exceed 0.86 pound per ton when melting iron.

These limitations shall limit the potential to emit PM to less than twenty-five (25) tons per year, and the potential to emit PM_{10} 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.2.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from facilities at this source shall be limited as follows when operating at the given maximum process weight rates:

Process Description	**Process Weight Rate (ton/hr)**	**326 IAC 6-3-2 Allowable (lb/hr)**
Melting Furnace IF1	3.6	9.67
Melting Furnace IF2	3.6	9.67
Melting Furnace IF3	3.6	9.67
Pouring/Casting - Disamatic	35	41.3
Pouring/Casting - Disaforma	80	49.06
Pouring/Casting - Pallet	7	15.1
Shakeout CCS	90	50.2

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:

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

or

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

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

D.2.3 HAPs Minor Limit [40 CFR 63]

The total organic HAPs emissions shall be less than 0.021 pounds per pound of resin from pouring, cooling and shakeout using shell core sand.

Compliance with this limit, along with other HAPs emissions, restricts total HAPs emissions from the source to less than twenty-five (25) tons per twelve (12) consecutive month period and keeps the source as an Area Source for HAPs.

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.2.5 Visible Emissions Notations

(a) Visible emission notations of the three (3) electric induction furnaces, identified as IF1 through IF3 and three (3) molding, pouring and cooling lines 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.5, the Permittee shall maintain records of visible emission notations of the three (3) electric induction furnaces, identified as IF1 through IF3, three (3) molding and pouring and cooling lines 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 the compliance status with Condition D.2.1, 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 three (3) electric induction furnaces, IF1 through IF3.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.2.7 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.2.2(a)(1), (b)(1) and (c)(1) shall be submitted, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

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) Sinto casting cleaner shotblaster, constructed in 2012, identified as CCL2, with emissions controlled by baghouse DC6, exhausting inside the building, and with maximum capacity of 6 tons of castings per hour.

(2) One (1) Wheelbrator shot blast cleaner, constructed in 1968, identified as CCL1, with PM and PM_{10} emissions controlled by baghouse DC5 and exhausting through stack S4, maximum capacity: 1 tons of castings per hour.

(3) 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 PM_{10} emissions from all of the grinders controlled by baghouse DC6 and exhausting inside the building, maximum throughput: 0.25 ton of castings per hour, each.

(4) Two (2) dual wheel grinders, constructed in 1993, identified as GR3 and GR4, with emissions from both grinders controlled by baghouse DC6 and exhausting inside the building, maximum throughput: 0.5 ton of castings per hour, each.

(5) One (1) semi-automatic grinder, constructred in 2016, identified as Maus 300, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

(6) One (1) semi-automatic grinder, approved in 2016 for construction, identified as Maus 600, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

(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 PSD Minor Limit [326 IAC 2-2]

The PM emissions at baghouse DC6 controlling seven (7) pedestal wheel grinders and two (2) dual wheel grinders shall not exceed 1.96 pounds per hour and the PM_{10} emissions shall not exceed 1.60 pounds per hour. This is equivalent to 8.59 tons of PM and 7.01 tons of PM_{10} 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 PM_{10} 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 to the 1993/1994 modification.

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

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(a) The PM emission rate from the Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600), after control DC6, shall not exceed 1.96 pounds per hour.

(b) The PM10 emission rate from the Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600), after control DC6, shall not exceed 1.6 pounds per hour.

(c) The PM2.5 emission rate from the Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600), after control DC6, shall not exceed 1.6 pounds per hour.

Compliance with these limits ensures that PM, PM10 and PM2.5 emissions from Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600) are less than 25, 15, and 10 tons per year, respectively, and render the requirements of 326 IAC 2-2 not applicable to these units. Therefore, these limitations rendered the 2012 modification and 2016 modification a single minor modification to an existing major source.

D.3.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight rate:

Emission Unit ID	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Shotblaster (CCL2)	6	13.6
Semi-automatic grinders, (Maus 300 and Maus 600)	0.30 (each)	1.83 (each)
Wheelbrator (CCL1)	1	4.1

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:

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

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan 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, Wheelbrator (CCL1), Shotblaster (CCL2) and Semi-automatic grinders (Maus 300 and Maus 600) and their control devices. Section B - Preventative Maintenance Plan contains the Permittee's obligations with regard to the plan required by this condition.

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

D.3.5 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to assure compliance with Condition D.3.3, the baghouse (DC5) shall be in operation and control emissions from the shotblaster (CCL1) at all times when the shotblaster (CCL1) is in operation.

(b) In order to assure compliance with Conditions D.3.1, D.3.2 and D.3.3, the baghouse (DC6) shall be in operation and control emissions at all times when one or more of the following emission unit is in operation: grinders (GR1-GR9, Maus 300, Maus 600) and shotblaster (CCL2)

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

D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to show compliance with Condition D.3.2, the Permittee shall perform PM, PM10 and PM2.5 testing for the baghouse DC6, no later than 180 days after the initial startup of Maus 600. The Permittte shall utilize test methods as approved by the Commissioner and the testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

All the emission units venting to the baghouse DC6 shall be in operation when the test is being performed.

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.

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

D.3.8 Visible Emissions Notations

(a) Visible emission notations of the Wheelbrator (CCL1) stack exhaust (S4) 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with respect to reasonable response steps. Failure to take response steps shall be considered a deviation from this permit.

D.3.9 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 (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), shotblaster (CCL2), and semi-automatic grinders, (Maus 300 and Maus 600) and baghouse (DC5) used in conjunction with Wheelbrator (CCL1) at least once per day when one or more of the associated emission unit to these controls is in operation. When, for any one (1) reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 7.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with respect to reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps contained in 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 or replaced at least once every six (6) months.

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

D.3.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.8, the Permittee shall maintain records of visible emission notations of the Wheelbrator (CCL1) 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 the compliance status with Condition D.3.9, 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) two (2) dual wheel grinders (GR3 and GR4), Shotblaster (CCL2) and semi-automatic grinders, (Maus 300 and Maus 600) and baghouse (DC5) used in conjunction with Wheelbrator (CCL1). 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) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligation with regard to the records required by this condition.

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, approved in 2013 for construction, 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 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 machine, approved in 2010 for construction, identified as ICM-L10(1), maximum capacity: 1.5 ton of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of catalyst (Dimethyl-ethylamine) per hour, with catalyst emissions controlled by a voluntary fume scrubber, exhausting through stack S8.

(C) 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;
(ii) One (1) surge hopper.

(D) One (1) isocure core machine, permitted in 2011, identified as ICM-L10(II), maximum capacity: 1.5 ton of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of catalyst (Dimethylethylamine) per hour, with catalyst emissions controlled by a voluntary fume scrubber, exhausting through stack LA-3.

(E) One (1) isocure core machine, constructed in 2006, identified as ICM-L20(1), with catalyst emissions controlled by a voluntary fume scrubber, exhausting to stack LA-1, maximum capacity: 1.5 tons of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of non-HAP catalyst per hour.

(F) One (1) isocure core machine, approved in 2011 for construction, identified as ICM-L20(II), maximum capacity: 1.5 ton of sand per hour, 24 pounds of resin per hour, and 2.1 pounds of catalyst (Dimethyl-ethylamine) per hour, with catalyst emissions controlled by a voluntary fume scrubber, exhausting through stack LA2.

(3) 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) Eight (8) 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.

(4) 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.

(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 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(a) The PM emissions from the baghouse DC3 controlling one (1) muller and Conveyors shall not exceed 5.71 pounds per hour.

(b) The PM10 emissions from the baghouse DC3 controlling one (1) muller and Conveyors shall not exceed 3.42 pounds per hour.

(c) The PM2.5 emissions from the baghouse DC3 controlling one (1) muller and Conveyors shall not exceed 2.26 pounds per hour.

Compliance with these emission limits will ensure that the potential to emit from mold sand handling system (MSH) is less than 25 tons of PM per year, less than 15 tons of PM10 per year and less than 10 tons of PM2.5 per year, therefore render the requirements of 326 IAC 2-2 not applicable to the 1987 modification and 2013 modification (SSM No. 033-33387-00019).

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

(a) In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(1) The sand throughput to the one (1) core sand handling system, identified as CSH-South, and one (1) isocure core machine, identified as ICM-L20(1), shall each be less than 9,090 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The PM emissions shall not exceed the pound per ton limits below:

Emission Unit	PM Emission Limit (lb/ton)
CSH-South	3.60
ICM-L20(1)	1.10

Compliance with the sand throughput limit combined with the PM pound per ton limit restricts the PM emissions from the modification to less than twenty-five (25) tons per twelve (12) consecutive month period and renders the requirements of 326 IAC 2-2 not applicable.

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

The following conditions shall apply to the isocure core machines, identified as ICM-L10(1), ICM-L10(II) and ICM-L20(II):

(a) The resin usage for the isocure core machines ICM-L10(1), ICM-L10(II) and ICM-L20(II) shall each be less than 149,629 pounds of resin per twelve (12) consecutive month period, with compliance determined at the end of each month, and the total catalyst usage shall each not exceed 13,200 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The VOC emissions (not including catalyst) from the isocure core machines, identified as ICM-L10(1), ICM-L10(II) and ICM-L20(II) shall each not exceed 0.09 pound per pound of resin.

(c) The total sand throughput to the three isocure core machines, identified as ICM-L10(1), ICM-L10(II), ICM-L20(II), shall be less than 27,270 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The PM_{10} emissions shall not exceed the pound per ton limits below:

Emission Unit	PM_{10} Emission Limit (lb/ton)
ICM-L10(1)	1.10
ICM-L10(II)	1.10
ICM-L20(II)	1.10

Compliance with these limits restricts the VOC to less than forty (40) tons per twelve (12) consecutive month period and PM_{10} to less than fifteen (15) tons per twelve (12) consecutive month period and renders the requirements of 326 IAC 2-2 not applicable to 169-28742-00019 and SSM 169-30337-00019.

D.4.4 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 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.

(b) 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.

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:

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

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from one (1) muller shall not exceed 51.3 pounds per hour, total, when operating at a process weight rate of 100 tons of sand per hour.

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

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

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

D.4.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) 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-L10(1), approved in 2010 for construction:

(1) The resin usage for the isocure core machine ICM-L10(1) shall be less than 266,666 pounds of resin per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) Total DMEA usage for the isocure process ICM-L10(1) shall be less than 26,000 pounds of DMEA per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The VOC emissions (not including catalyst) from the isocure core machine ICM-L10(1) shall be less than 0.09 pound per pound of resin before controls.

(4) The VOC emissions from ICM-L10(1) shall be less than 1.0 pound per pound of catalyst before controls.

Compliance with these limits will limit the potential VOC emissions from the isocure core machine to less than 25 tons per 12 consecutive month period and render the requirements of 326 IAC 8-1-6 not applicable.

(b) 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):

(1) The resin usage for isocure core machine ICM-L20(1) shall be less than 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 isocure core machine ICM-L20(1) shall be less than 0.05 pound per pound of resin before controls.

(3) The VOC emissions from ICM-L20(1) shall be less than 1.0 pound per pound of catalyst before controls.

(c) 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 isocure core machines, identified as ICM-L10(II) and ICM-L20(II):

(1) The resin usage for each isocure core machine ICM-L10(II) and ICM-L20(II) shall be less than 266,666 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 26,000 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The VOC emissions (not including catalyst) from each isocure core machine ICM-L10(II) and ICM-L20(II) shall be less than 0.09 pound per pound of resin.

(3) The VOC emissions from ICM-L10(II) and ICM-L20(II) shall be less than 1.0 pound per pound of catalyst before controls.

D.4.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

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

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

In order to demonstrate the compliance status with Condition D.4.1, the Permittee shall perform PM, PM_{10} and PM2.5 testing for the mold sand handling operations (MSH), exhausting to baghouse DC3, no later than 180 days after the initial startup of one (1) muller, approved in 2013 for construction. The Permittte shall utilize test methods as approved by the Commissioner and the testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and PM2.5 includes filterable and condensable PM. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.4.8 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to assure compliance with Conditions D.4.1 and D.4.4(c), 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 assure compliance with Condition D.4.4(a), 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 assure compliance with Condition D.4.4(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.

D.4.9 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 baghouses 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.

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

D.4.10 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.4.11 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 when the sand handling is in operation. When, for any one (1) reading, the pressure drop across the baghouse is outside the normal range the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 7.2 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps 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 or replaced at least once every six (6) months.

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

D.4.12 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.2, D.4.3, and D.4.5 the Permittee shall maintain records of the quantity of sand processed each month by the core sand handling systems.

(b) To document the compliance status with Condition D.4.3 and D.4.5, the Permittee shall maintain records of the catalyst and resin usage at each of the isocure core machines, identified as ICM-L10(1), ICM-L10(II), ICM-L20(1) and ICM-L20(II), for each month.

(c) To document the compliance status with Condition D.4.5, the Permittee shall maintain records of the VOC content of binders used at each of the isocure core machines each month.

(d) To document the compliance status with Condition D.4.10, 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 the compliance status with Condition D.4.11, 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) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligation with regard to the records required by this condition.

D.4.13 Reporting Requirements

A quarterly summary of the information to document the compliance with Conditions D.4.2, D.4.3, and D.4.5 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

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:

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

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility. Section B - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

SECTION D.6 FACILITY OPERATION CONDITIONS

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

(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. [326 IAC 6-3-2]

(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. [326 IAC 6-3-2]
(2) Using 80 tons or less of welding consumables. [326 IAC 6-3-2]

(d) Other activities or categories not previously identified with potential, uncontrolled emissions equal to or less than insignificant activity thresholds:

(1) Pattern Shop woodworking activities, constructed in 1973, equipped with a sock filter. [326 IAC 6-3-2]

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

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

D.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 degreaser with a cover.

(b) Equip the degreaser with a device for draining cleaned parts.

(c) Close the degreaser cover whenever parts are not being handled in the degreaser..

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.

(e) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(f) Store waste solvent only in covered containers.

(g) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

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

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from the Grinding and machining operations, structural steel activities and Pattern Shop woodworking activities, which have a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Facilities Subject to 40 CFR 63, Subpart ZZZZZ

Entire Source

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

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to Hazardous Air Pollutants [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.10895, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions as specified in 40 CFR 63.10890(i).

E.1.2 National Emission Standards for Hazardous Air Pollutants for Source Category: Iron and Steel Foundries [326 IAC 20-1][40 CFR Part 63, Subpart ZZZZZ]

Pursuant to 40 CFR Part 63, Subpart ZZZZZ, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZZ (included as Attachment A):

(1) 40 CFR 63.10880 (a), (b)(1), (c), (f)
(2) 40 CFR 63.10881 (a)(1)
(3) 40 CFR 63.10885 (a)(1), (a)(2)(i)
(4) 40 CFR 63.10890 (a), (b), (c)(1), (d), (e), (f), (i)
(5) 40 CFR 63.10895 (c), (e)
(6) 40 CFR 63.10896
(7) 40 CFR 63.10897 (a)(1), (d), (e), (f), (g)
(8) 40 CFR 63.10899
(9) 40 CFR 63.10905
(10) 40 CFR 63.10906

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31172-00019

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 AND ENFORCEMENT 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
Part 70 Permit No.: T169-31172-00019

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- 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
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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facilities: Pouring and cooling at the one (1) Disaforma molding/pouring line
Parameter: Throughput of metal
Limit: Less than 16,665 tons per consecutive twelve (12) month period with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facilities: Pouring and cooling at the one (1) Disamatic molding/pouring line
Parameter: Throughput of metal
Limit: Less than 4,613 tons per consecutive twelve (12) month period with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facilities: Three (3) electric induction furnaces, IF1 through IF3
Parameter: Iron throughput
Limit: 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.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) core sand handling system, identified as CSH-South
Parameter: Sand throughput
Limit: Less than 9,090 tons of sand per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) core sand handling system, identified as ICM-L20(1)
Parameter: Sand throughput
Limit: Less than 9,090 tons of sand per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

Month	Sand Usage (tons)	Sand Usage (tons)	Sand Usage (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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: Isocure core machines, identified as ICM-L10(1), ICM-L10(II) & ICM-L20(II)
Parameter: Sand throughput
Limit: Less than 27,270 tons of sand per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

Month	Sand Usage (tons)			Sand Usage (tons)			Sand Usage (tons)
	This Month			Previous 11 Months			12 Month Total
	ICM-L10(1)	ICM-L10(II)	ICM-L20(II)	ICM-L10(1)	ICM-L10(II)	ICM-L20(II)	

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) isocure core machine, identified as ICM-L10(1)
Parameter: Resin usage
Limit: Less than 149,629 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) isocure core machine, identified as ICM-L10(1)
Parameter: Catalyst usage
Limit: Less than 13,200 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

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(1)
Parameter: Resin usage
Limit: Less than 331,128 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

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(1)
Parameter: Catalyst usage
Limit: Less than 33,113 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) isocure core machine, identified as ICM-L10(II)
Parameter: Resin usage
Limit: Less than 149,629 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) isocure core machine, identified as ICM-L10(II)
Parameter: Catalyst usage
Limit: Less than 13,200 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) isocure core machine, identified as ICM-L20(II)
Parameter: Resin usage
Limit: Less than 149,629 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T 169-31172-00019
Facility: One (1) isocure core machine, identified as ICM-L20(II)
Parameter: Catalyst usage
Limit: Less than 13,200 pounds per consecutive twelve (12) month period, with compliance determined at the end of each month.

QUARTER : _____ 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Part 70 Permit No.: T169-31172-00019

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and Significant Permit Modification

Source Description and Location

Source Name:	Manchester Metals, LLC
Source Location:	205 Wabash Road, North Manchester, Indiana 46962
County:	Wabash
SIC Code:	3321 (Gray and Ductile Iron Foundries)
Operation Permit No.:	T 169-31172-00019
Operation Permit Issuance Date:	July 5, 2012
Significant Source Modification No.:	T 169-36915-00019
Significant Permit Modification No.:	T 169-37096-00019
Permit Reviewer:	Renee Traivaranon

Existing Approvals

The source was issued Part 70 Operating Permit No. T169-31172-00019 on July 5, 2012. The source has since received the following approvals:

(a) Administrative Amendment No. 169-32116-00019, issued on July 25, 2012

(b) Significant Source Modification No. 169-32896-00019, issued on June 19, 2013

(c) Significant Permit Modification No. 169-32908-00019, issued on July 10, 2013

(d) Significant Source Modification No. 169-33387-00019, issued on September 11, 2013

(e) Significant Permit Modification No. 169-33410-00019, issued on October 8, 2013

(f) Administrative Amendment No. 169-36112-00019, issued on October 8, 2015

County Attainment Status

The source is located in Wabash County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Ozone Standards
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 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 and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Wabash County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Wabash County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a gray and ductile iron foundry it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	PTE of the Entire Source Before the Amendment (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Worst Single HAP	Total HAP
Scrap and Charge Handling	19.7	11.8	11.8	-	-	-	-	-	-	0.1
Melting Furnaces	15.6	14.9	24.5	-	-	-	-	-	-	0.9
Innoculation operations (Mg Treatment)	59.1	59.1	59.1	-	-	-	-	-	-	-
Pouring/Casting - Disamatic	9.7	4.8	4.8	-	-	-	13.8	-	6.0 Benzene	20.4
Castings Cooling - Disamatic	3.2	3.2	3.2	-	-	-	-	-		
Pouring/Casting - Disaforma	<24.8	<15.0	15.0	-	-	0.8	35.5	-		
Castings Cooling - Disaforma	8.3	8.3	8.3	-	-	-	-	-		
Pouring/Casting - pallet	18.4	9.0	9.0	-	-	0.6	26.3	-		
Castings Cooling - pallet	6.1	6.1	6.1	-	-	-	-	-		
Shakeout (CO included in pouring/cooling)	105.1	73.6	73.6	-	-	-	--	-		
GR-1 thru GR-9	8.6	7.0	-	-	-	-	-	-	-	0.9
CCL3	33.2	18.6	18.6	-	-	-	-	-	-	
Core Sand Handling North (CSH-North)	43.4	6.5	6.5	-	-	-	-	-	-	-

Process/ Emission Unit	PTE of the Entire Source Before the Amendment (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Worst Single HAP	Total HAP
Core Sand Handling South (CSH-South)	23.7	3.5	3.5	-	-	-	-	-	-	-
ICM-L20(1)	5.0	5.0	5.0	-	-	24.8	-	-	-	2.3
ICM-L10(1), ICM-L10(II) & ICM-L20(II)	21.7	15.0	21.7	-	-	40.0	-	-	-	
Shell core making process (SCM and SSH-North)	31.5	4.7	4.7	-	-	13.1	-	-	-	-
One (1) air set core machine (ACM)	-	-	-	-	-	9.9	-	-	-	0.2
Preheater	-	-	-	-	0.5	-	-	2,102	-	-
Ladle Heaters	-	-	-	-	1.1	-	1.0		-	
Combustion	-	-	-	-	1.8	-	1.5		-	
Insignificant Activities	14	14	14	-	-	-	-	-	-	-
Year 2012 Modification (Shotblaster (CCL2) and Robotic Grinders (RG1-RG4)***	8.6	7.0	7.0	-	-	-	-	-		
2013 Modification Muller and Conveyors (DC3)***	24.9	14.9	9.9	-	-	-	-	-	-	-
Total PTE of Entire Source	**453.7**	**271**	**378**	**-**	**4**	**92**	**78**	**2,102**	**6**	**24.8**
PSD Major Source Thresholds	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100,000 CO_2e**	**NA**	**NA**

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
*** PSD Minor Modification to an Existing PSD Major Source

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

(c) These emissions are based upon Administrative Amendment No.: 169-36112-00019, issued on October 8, 2015.

(d) On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Manchester Metals, LLC on March 7, 2016, relating to construction of two (2) new semi-automatic grinders and removal of four (4) existing grinders.

The following is a list of the new emission units and pollution control devices:

(a) One (1) semi-automatic grinder, constructred in 2016, identified as Maus 300, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

The RG4 was taken out of service and replaced by Maus 300.

(b) One (1) semi-automatic grinder, approved in 2016 for construction, identified as Maus 600, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

This addition of the grinders will also be identified as 2016 Modification.

The following is a list of the existing emission units and pollution control devices removed from the source:

Four (4) robotic grinders, identified as RG1-RG4; RG1 and RG2 constructed in 2010, RG3 constructed in 2012, and RG4 approved in 2013 for construction, with emissions controlled by baghouse DC6, exhausting inside the building, and each with maximum capacity of 0.15 tons of castings per hour.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

	PTE Before Controls of the Modification (new units) (tons/year)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**Total HAPs**	**Highest Single HAP**
Semi-auto grinders, Maus 300 and Maus 600	44.68	4.47	4.47	0	0	0	0	0.7	negl
Total for New Units	**44.68**	**4.47**	**4.47**	**0**	**0**	**0**	**0**	**0.7**	**negl**

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

See Appendix A of this TSD for detail calculations of new units.

(a) Approval to Construct
This source modification is considered a significant source modification, pursuant to 326 IAC 2-7-10.5(g)(4)(A), the potential to emit PM is greater than twenty-five (25) tons per year before control.

(b) Approval to Operate
This permit modification is considered a significant permit modification, pursuant to 326 IAC 2-7-12(d)(1), because this modification does not qualify as a minor permit modification or as administrative amendment. This modification requires a case-by-case determination of an emission limitation or other standard (e.g. PSD Minor limit).

Permit Level Determination – PSD

The table below summarizes the potential to emit of the entire source after issuance of this modification, reflecting all limits, of the emission units, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	PTE of the Entire Source to Accommodate the Proposed Modification (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	~~GHGs~~	Worst Single HAP	Total HAP
Scrap and Charge Handling	19.7	11.8	11.8	-	-	-	-	-	-	0.1
Melting Furnaces	15.6	14.9	24.5	-	-	-	-	-	-	0.9
Innoculation operations (Mg Treatment)	59.1	59.1	59.1	-	-	-	-	-	-	-
Pouring/Casting - Disamatic	9.7	4.8	4.8	-	-	-	13.8	-	6.0 Benzene	20.4
Castings Cooling - Disamatic	3.2	3.2	3.2	-	-	-	-	-		
Pouring/Casting - Disaforma	<24.8	<15.0	15.0	-	-	0.8	35.5	-		
Castings Cooling - Disaforma	8.3	8.3	8.3	-	-	-	-	-		
Pouring/Casting - pallet	18.4	9.0	9.0	-	-	0.6	26.3	-		
Castings Cooling - pallet	6.1	6.1	6.1	-	-	-	-	-		
Shakeout (CO included in pouring/cooling)	105.1	73.6	73.6	-	-	-	--	-		
1993/1994 Modification GR-1 thru GR-9 **(DC6)**	8.6	7.0	-	-	-	-	-	-	-	0.9
CCL3	33.2	18.6	18.6	-	-	-	-	-	-	
Core Sand Handling North (CSH-North)	43.4	6.5	6.5	-	-	-	-	-	-	-
Core Sand Handling South (CSH-South)	23.7	3.5	3.5	-	-	-	-	-	-	-
ICM-L20(1)	5.0	5.0	5.0	-	-	24.8	-	-	-	2.3
ICM-L10(1), ICM-L10(II) & ICM-L20(II)	21.7	15.0	21.7	-	-	40.0	-	-	-	
Shell core making process (SCM and SSH-North)	31.5	4.7	4.7	-	-	13.1	-	-	-	-
One (1) air set core machine (ACM)	-	-	-	-	-	9.9	-	-	-	0.2
Preheater	-	-	-	-	0.5	-	-	~~2,102~~	-	-
Ladle Heaters	-	-	-	-	1.1	-	1.0		-	
Combustion	-	-	-	-	1.8	-	1.5		-	
Insignificant Activities	14	14	14	-	-	-	-	-	-	-
Year 2012 **and 2016** Modification (Shotblaster (CCL2) ~~and Robotic Grinders (RG1-RG4~~) **and Semi-automatic grinders (Maus 300 and Maus 600) (DC6)*****	8.6	7.0	7.0	-	-	-	-	-	-	-
2013 Modification Muller and Conveyors (DC3)***	24.9	14.9	9.9	-	-	-	-	-	-	-

Process/ Emission Unit	PTE of the Entire Source to Accommodate the Proposed Modification (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	~~GHGs~~	Worst Single HAP	Total HAP
Total PTE of Entire Source	453.7	271	378	-	4	92	78	~~2,102~~	6	24.8
PSD Major Source Thresholds	100	100	100	100	100	100	100	~~100,000 CO_2e~~	NA	NA
Significant Thresholds	**25**	**15**	**10**	**40**	**40**	**40**	**100**	**-**	**NA**	**NA**

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
*** PSD Minor Modification to an Existing PSD Major Source

There are no changes to the PTE of this source after the proposed modification.

The table below summarizes the potential to emit of the entire source after issuance of this modification, reflecting all limits, of the emission units. Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted.

Process/ Emission Unit	PTE of the Entire Source After the Proposed Modification (tons/year)								
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Worst Single HAP	Total HAP
Scrap and Charge Handling	19.7	11.8	11.8	-	-	-	-	-	0.1
Melting Furnaces	15.6	14.9	24.5	-	-	-	-	-	0.9
Innoculation operations (Mg Treatment)	59.1	59.1	59.1	-	-	-	-	-	-
Pouring/Casting - Disamatic	9.7	4.8	4.8	-	-	-	13.8	6.0 Benzene	20.4
Castings Cooling - Disamatic	3.2	3.2	3.2	-	-	-	-		
Pouring/Casting - Disaforma	<24.8	<15.0	15.0	-	-	0.8	35.5		
Castings Cooling - Disaforma	8.3	8.3	8.3	-	-	-	-		
Pouring/Casting - pallet	18.4	9.0	9.0	-	-	0.6	26.3		
Castings Cooling - pallet	6.1	6.1	6.1	-	-	-	-		
Shakeout (CO included in pouring/cooling)	105.1	73.6	73.6	-	-	-	--		
1993/1994 Modification GR-1 thru GR-9 (DC6)	8.6	7.0	-	-	-	-	-	-	0.9
CCL3	33.2	18.6	18.6	-	-	-	-	-	
Core Sand Handling North (CSH-North)	43.4	6.5	6.5	-	-	-	-	-	-
Core Sand Handling South (CSH-South)	23.7	3.5	3.5	-	-	-	-	-	-
ICM-L20(1)	5.0	5.0	5.0	-	-	24.8	-	-	2.3
ICM-L10(1), ICM-L10(II) & ICM-L20(II)	21.7	15.0	21.7	-	-	40.0	-	-	

Process/ Emission Unit	PTE of the Entire Source After the Proposed Modification (tons/year)								
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Worst Single HAP	Total HAP
Shell core making process (SCM and SSH-North)	31.5	4.7	4.7	-	-	13.1	-	-	-
One (1) air set core machine (ACM)	-	-	-	-	-	9.9	-	-	0.2
Preheater	-	-	-	-	0.5	-	-	-	-
Ladle Heaters	-	-	-	-	1.1	-	1.0	-	
Combustion	-	-	-	-	1.8	-	1.5	-	
Insignificant Activities	14	14	14	-	-	-	-	-	-
Year 2012 and 2016 Modification (Shotblaster (CCL2) and Semi-automatic grinders (Maus 300 and Maus 600) (DC6)***	8.6	7.0	7.0	-	-	-	-	-	-
2013 Modification Muller and Conveyors (DC3)***	24.9	14.9	9.9	-	-	-	-	-	-
Total PTE of Entire Source	**453.7**	**271**	**378**	-	**4**	**92**	**78**	**6**	**24.8**
PSD Major Source Thresholds	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**NA**	**NA**
Significant Thresholds	**25**	**15**	**10**	**40**	**40**	**40**	**100**	**NA**	**NA**

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
*** PSD Minor Modification to an Existing PSD Major Source

PSD:

Semi-automatic grinders (Maus 300 and Maus 600) replaced the existing Robotic Grinders (RG1-RG4). In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(a) The PM emission rate from the Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600), after control DC6, shall not exceed 1.96 pounds per hour.

(b) The PM10 emission rate from the Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600), after control DC6, shall not exceed 1.6 pounds per hour.

(c) The PM2.5 emission rate from the Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600), after control DC6, shall not exceed 1.6 pounds per hour.

Compliance with these limits ensures that PM, PM10 and PM2.5 emissions from Shotblaster (CCL2) and the semi-automatic grinders (Maus 300 and Maus 600) are less than 25, 15, and 10 tons per year, respectively, and render the requirements of 326 IAC 2-2 not applicable to these units. Therefore, these limitations rendered the 2012 modification and 2016 modification a single minor modification to an existing major source.

Since Maus 300 and Maus 600 semi-automatic grinders are also controlled by the same DC6, they are now included in the existing limits.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included to this proposed modification.

NESHAP:

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included to this proposed modification.

CAM

(c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 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.

Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
semi-automatic grinders (Maus 300 and Maus 600)/PM	Y	Y	<100	NA	100	N	N
semi-automatic grinders (Maus 300 and Maus 600)/PM10	Y	N	<100	NA	100	N	N
semi-automatic grinders (Maus 300 and Maus 600)/PM2.5	Y	N	<100	NA	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)
PSD applicability is discussed under the Permit Level Determination – PSD section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of semi-automatic grinders (Maus 300 and Maus 600) will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-7-6(5) (Annual Compliance Cerification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each semi-automatic grinder (Maus 300 and Maus 600) shall not exceed 1.83 pounds per hour when operating at a process weight rate of 0.30 tons per hour. The pound per hour limitation was calculated with the following equation:

> Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:
>
> $E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
> P = process weight rate in tons per hour

The baghouse (DC6) shall be in operation at all times the grinders are in operation, in order to comply with this limit.

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.

The compliance monitoring requirements applicable to this modification are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Baghouse (DC6)	Water Pressure Drop	Daily	3 to 7 inches	Response Steps

Testing:

Since the baghouse is required to control emissions from these units (Maus 300 and Maus 600), and this baghouse is a common control for the existing 9 grinders and shotblaster (CCL2), and based on the limited PTE, the baghouse is required to operate at a minimum of 98.6% overall control efficiency, testing will be required.

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Limit or Requirement**
Shotblaster (CCL2)	baghouse DC6	no later than 180 days after the initial startup of 600	PM, PM10 and PM2.5	once every five (5) years from the date of the valid compliance demonstration	1.96 lb/hr for PM and 1.6 lb/hr for PM10/PM2.5
Maus 300					
Maus 600					

Shotblaster (CCL2) has already begun operation in 2012. Testing was initially required 180 days after the initial start-up of RG4, but it was replaced by Maus 300 in 2016 before testing was conducted. Testing will be required 180 days after the initial start-up of Maus 600.

All the emission units venting to the baghouse DC6 shall be in operation when the test is being performed.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T 169-31172-00019.

(a) The description of the Robotic Grinders (RG1-RG4) has been removed and replaced by two (2) semi-automatic grinders (Maus 300 and Maus 600) in Section A.2, Section D.3.

(b) Conditions D.3.2 and D.3.3 limits have been revised to remove the Robotic Grinders (RG1-RG4), and replaced by the two semi-automatic grinders (Maus 300 and Maus 600).

(c) Conditions D.3.4 for PMP and D.3.5 for particulate control have been revised.

(d) Condition D.3.6 has been revised since RG4 has been removed and replaced by Maus 300.

(e) Conditions D.3.9 for monitoring and D.3.10 for record keeping have been revised.

(d) IDEM has made additional changes to the permit as follows:

(1) 326 IAC 2-7-1 was updated on August 1, 2014. This rule update changed the rule cite for the definition of “Regulated Pollutant” used only for purposes of “Emission Reporting”. Therefore, Section C Emission Statement has been updated accordingly.

(2) 326 IAC 2-7-16 states that the Permittee must notify IDEM within "four (4) daytime business hours" for emergencies. The Emergency Occurrence Report Form lacked the word 'daytime'. 'Daytime' is being added to be consistent with the rule.

The permit has been revised as follows with deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

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

…

(d) One (1) cleaning and finishing process consisting of the following emission units and pollution control devices:

…..

(5) ~~Four (4) robotic grinders, identified as RG1-RG4, RG1 and RG2 constructed in 2010, RG3 constructed in 2012, and RG4 approved in 2013 for construction, with emissions controlled by baghouse DC6, exhausting inside the building, and each with maximum capacity of 0.15 tons of castings per hour.~~ **One (1) semi-automatic grinder, constructred in 2016, identified as Maus 300, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.**

(6) One (1) semi-automatic grinder, approved in 2016 for construction, identified as Maus 600, each with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

….

C.16 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]

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~~**33)** (“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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

….

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:
….

(5) ~~Four (4) robotic grinders, identified as RG1-RG4, RG1 and RG2 constructed in 2010, RG3 constructed in 2012, and RG4 approved in 2013 for construction, with emissions controlled by baghouse DC6, exhausting inside the building, and each with maximum capacity of 0.15 tons of castings per hour.~~ **One (1) semi-automatic grinder, constructred in 2016, identified as Maus 300, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.**

(6) One (1) semi-automatic grinder, approved in 2016 for construction, identified as Maus 600, with a maximum capacity throughput of 0.30 tons of castings per hour, using a common baghouse DC6 for control, and exhausting inside the building.

(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 PSD Minor Limit [326 IAC 2-2]

The PM emissions at baghouse DC6 controlling seven (7) pedestal wheel grinders and two (2) dual wheel grinders shall not exceed 1.96 pounds per hour and the PM_{10} emissions shall not exceed 1.60 pounds per hour. This is equivalent to 8.59 tons of PM and 7.01 tons of PM_{10} 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 PM_{10} 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 to the 1993/1994 modification.

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

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(a) The PM emission rate from the Shotblaster (CCL2) and ~~Robotic Grinders (RG1-RG4), combined~~ **the semi-automatic grinders (Maus 300 and Maus 600)**, after control DC6, shall not exceed 1.96 pounds per hour.

(b) The PM10 emission rate from the Shotblaster (CCL2) and ~~Robotic Grinders (RG1-RG4), combined~~ **the semi-automatic grinders (Maus 300 and Maus 600)**, after control DC6, shall not exceed 1.6 pounds per hour.

(c) The PM2.5 emission rate from the Shotblaster (CCL2) and ~~Robotic Grinders (RG1-RG4), combined~~ **the semi-automatic grinders (Maus 300 and Maus 600)**, after control DC6, shall not exceed 1.6 pounds per hour.

Compliance with these limits ensures that ~~the total~~ PM, ~~total~~ PM10 and ~~total~~ PM2.5 emissions from Shotblaster (CCL2) and ~~Robotic Grinders (RG1-RG4)~~ **the semi-automatic grinders (Maus 300 and Maus 600)** are less than 25, 15, and 10 tons per year, respectively, and render the requirements of 326 IAC 2-2 not applicable to these units**. Therefore, these limitations rendered the 2012 modification and 2016 modification a single minor modification to an existing major source.**

D.3.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight rate:

Emission Unit ID	Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr)
Shotblaster (CCL2)	6	13.6
~~Robotic Grinders (RG1-RG4)~~ **Semi-automatic grinders, (Maus 300 and Maus 600)**	~~0.15~~ **0.30 (each)**	~~1.15~~ **1.83 (each)**
Wheelbrator (CCL1)	1	4.1

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:

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

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan 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, Wheelbrator **(**CCL1**)**, Shotblaster (CCL2) and ~~Robotic Grinders (RG1-RG4)~~ **Semi-automatic grinders (Maus 300 and Maus 600)** and their control devices. Section B - Preventative Maintenance Plan contains the Permittee's obligations with regard to the plan required by this condition.

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

D.3.5 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to assure compliance with Condition D.3.3, the baghouse (DC5) shall be in operation and control emissions from the shotblaster (CCL1) at all times when the shotblaster (CCL1) is in operation.

(b) In order to assure compliance with Conditions D.3.1, D.3.2 and D.3.3, the baghouse (DC6) shall be in operation and control emissions at all times when one or more of the following emission unit is in operation: grinders (GR1-GR9, ~~and RG1-RG4~~ **Maus 300 Maus 600**) and shotblaster (CCL2)

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

D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to show compliance with Condition D.3.2, the Permittee shall perform PM, PM10 and PM2.5 testing for the baghouse DC6, no later than 180 days after the initial startup of ~~RG4~~ **Maus 600**. The Permittte shall utilize test methods as approved by the Commissioner and the testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

All the emission units venting to the baghouse DC6 shall be in operation when the test is being performed.

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.

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

D.3.8 Visible Emissions Notations

(a) Visible emission notations of the Wheelbrator (CCL1) stack exhaust (S4) 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with respect to reasonable response steps. Failure to take response steps shall be considered a deviation from this permit.

D.3.9 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 (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), shotblaster (CCL2), and ~~Robotic Grinders (RG1-RG4)~~ **semi-automatic grinders, (Maus 300 and Maus 600)** and baghouse (DC5) used in conjunction with Wheelbrator (CCL1) at least once per day when one or more of the associated emission unit to these controls is in operation. When, for any one (1) reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 7.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with respect to reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps contained in 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 or replaced at least once every six (6) months.

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

D.3.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.8, the Permittee shall maintain records of visible emission notations of the Wheelbrator (CCL1) 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 the compliance status with Condition D.3.9, 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) two (2) dual wheel grinders (GR3 and GR4), Shotblaster (CCL2) and ~~Robotic Grinders (RG1-RG4)~~ **semi-automatic grinders, (Maus 300 and Maus 600)** and baghouse (DC5) used in conjunction with Wheelbrator (CCL1). 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).

….

☐ This is an emergency as defined in 326 IAC 2-7-1(12) • The Permittee must notify the Office of Air Quality (OAQ), within four (4) **daytime** business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and • 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.

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. T 169-36915-00019 and Significant Permit Modification No. T 169-37096-00019. The staff recommend to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Renee Traivaranon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5615 or toll free at 1-800-451-6027 extension 4-5615.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emission Calculations
Summary of Emissions from Modification

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Unlimited Potential to Emit of Modification (tons/year) - Part 70 Permit Level Determination										
Process	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAP**	**Single HAP**	
Semi-automatic grinders (Maus 300 and Maus 600)	44.68	4.47	4.47	0	0	0	0	0.07	0.03	**nickel**
Total	**44.68**	**4.47**	**4.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.03**	**nickel**

Limited Potential to Emit of Modification (tons/year)										
Process	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAP**	**Single HAP**	
Shot Blast Unit (CCL 2) Semi-automatic grinders (Maus 300 and Maus 600)	8.58	7.01	7.01	0	0	0	0	0.01	0.00	**0**
Total	**25.00**	**-**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**

Appendix A: Emission Calculations
Unrestricted Potential Emissions By Process

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Uncontrolled PTE

Process	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Scrap and Charge Handling	19.71	11.83	11.83	0	0	0	0
Melting (furnaces IF1, IF2 & IF3)	25.62	24.48	24.48	0	0	0	0
Inoculation operations (Magnesium Treatment)	59.13	59.13	59.13	0	0	0.16	0
Pouring/Casting - Total	137.97	67.67	67.67	0.66	0.33	4.60	197.10
Castings Cooling - total	45.99	45.99	45.99	0	0	0	0
Shakeout (CO included in pouring/cooling)	105.12	73.58	73.58	0	0	39.42	0
Cleaning and Finishing (total)	446.76	44.68	44.68	0	0	0	0
Mold sand handling system (MSH)	1,282.61	1,282.61	1,282.61	0	0	0	0
Core Sand Handling North (CSH-North)	43.36	6.50	6.50	0	0	0	0
Core Sand Handling South (CSH-South)	23.65	3.55	3.55	0	0	0	0
Isocure ICM-L20	7.23	7.23	7.23	0	0	29.57	0
Isocure ICM-L10, ICM-L10(II) & ICM-L20(II)	21.68	21.68	21.68	0	0	88.70	0
Shell core making process (SCM and SSH-North)	31.54	4.73	4.73	0	0	13.14	0
One (1) air set core machine (ACM)	0	0	0	0	0	9.86	0
Preheater	0.01	0.04	0.04	0.00	0.51	0.03	0.43
Ladle Heaters	0.02	0.09	0.09	0.01	1.14	0.06	0.96
Insignificant Combustion	0.03	0.13	0.13	0.01	1.75	0.10	1.47
Insignificant core wash	0	0	0	0	0	1.00	0
Insignificant parts washer	0	0	0	0	0	1.00	0
Insignificant woodworking	0	0	0	0	0	0	0
Insignificant material handling	7.00	7.00	7.00	0	0	0	0
Insignficant grinding and machining	1.00	1.00	1.00	0	0	0	0
Insignificant paved and unpaved roads	5.00	5.00	5.00	0	0	0	0
Insig maintenance welding, cutting	1.50	1.50	1.50	0	0	0	0
Overall source total	**2,265**	**1,668**	**1,668**	**0.68**	**3.73**	**187.63**	**199.96**

Total For All Pouring/Casting and Cooling and Cleaning/Finishing considering Melting Bottleneck of 7.5 tons metal/hr

Appendix A: Emission Calculations
Limited Potential Emissions By Process

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Limited PTE

Process	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Scrap and Charge Handling	19.7	11.8	11.8	0	0	0	0
Melting (furnaces IF1, IF2 & IF3)	15.6	14.9	24.48	0	0	0	0
Inoculation operations (Magnesium Treatment)	59.1	59.1	59.1	0	0	0	0
Pouring/Casting - disamatic	9.7	4.8	4.8	0	0	0	13.8
Castings Cooling - disamatic	3.2	3.2	3.2	0	0	0	0
Pouring/Casting/Cooling - disaforma	25.00	15.00	21.08	0	0	1.2	50.0
Pouring/Casting - pallet	18.4	9.0	9.0	0	0	0.6	26.3
Castings Cooling - pallet	6.1	6.1	6.1	0	0	0	0
Shakeout (CO included in pouring/cooling)	105.1	73.6	73.6	0.0	0.0	39.4	--
GR-1 thru GR-9	8.58	7.01	7.01	0	0	0	0
Castings Cleaning and Finishing (Shotblaster CCL1)	17.96	7.45	7.45	0	0	0	0
Shotblaster (CCL2) Grinders (Maus 300-Maus 600)	8.58	7.01	7.01	0	0	0	0
One (1) mold sand handling system	25.0	15.0	15.0	0	0	0	0
Core Sand Handling North (CSH-North)	43.4	6.5	6.5	0	0	0	0
Core Sand Handling South (CSH-South)	23.7	3.5	3.5	0	0	0	0
ICM-L20	5.0	5.0	5.0	0	0	24.8	0
ICM-L10, ICM-L10(II) & ICM-L20(II)	21.7	15.0	21.7	0	0	40.0	0
Shell core making process (SCM and SSH-North)	31.5	4.7	4.7	0	0	13.1	0
One (1) air set core machine (ACM)	0	0	0	0	0	9.9	0
Preheater	0	0	0	0	0.5	0	0
Ladle Heaters	0	0	0	0	1.1	0	1.0
Insignificant Combustion	0	0	0	0	1.8	0	1.5
Insignificant core wash	0	0	0	0	0	1.0	0
Insignificant parts washer	0	0	0	0	0	1.0	0
Insignificant woodworking	0	0	0	0	0	0	0
Insignificant material handling	7.0	7.0	7.0	0	0	0	0
Insignficant grinding and machining	1.0	1.0	1.0	0	0	0	0
Insignificant paved and unpaved roads	5.0	5.0	5.0	0	0	0	0
Insignificant maintenance welding, and cutting	1.5	1.5	1.5	0	0	0	0
Overall source total	**461.91**	**283.58**	**305.90**	**0.32**	**3.55**	**131.70**	**92.97**

Appendix A: Emission Summary
PSD Actual to Projected Actual Assessment (ATAP) for Modification

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Baseline Actual Emissions									
Process	Average Throughput (tons/year)*	Emission Factor (lb/ton)				Emissions (tons/year)			
		PM	PM10	PM2.5	CO	PM	PM10	PM2.5	CO
Melting - Furnaces IF1, IF2 & IF3	14,469	0.90	0.86	0.86	0	6.51	6.22	6.22	0
Pouring/Casting - Disamatic	920	4.20	2.06	2.06	6.00	1.93	0.95	0.95	2.76
Cooling - Disamatic		1.40	1.40	1.40		0.64	0.64	0.64	
Pouring/Casting - Disaforma	10,104	3.00	1.80	2.53	6.00	15.16	9.09	12.78	30.31
Cooling - Disaforma									
Pouring/Casting - Pallet Line and Floor Stations	3,121	4.20	2.06	2.06	6.00	6.55	3.21	3.21	9.36
Cooling - Pallet Line and Floor Stations		1.40	1.40	1.40		2.18	2.18	2.18	
Total Baseline Actual Emissions						**32.98**	**22.30**	**25.99**	**42.43**

Future Projected Actuals									
Process	Future Projected Throughput (tons/year)*	Emission Factor (lb/ton)				Emissions (tons/year)			
		PM	PM10	PM2.5	CO	PM	PM10	PM2.5	CO
Melting - Furnaces IF1, IF2 & IF3	13,042	0.90	0.86	0.86	0.00	5.87	5.61	5.61	0.00
Pouring/Casting - Disamatic	1,920	4.20	2.06	2.06	6.00	4.03	1.98	1.98	5.76
Cooling - Disamatic		1.40	1.40	1.40		1.34	1.34	1.34	
Pouring/Casting - Disaforma	9,360	3.00	1.80	2.53	6.00	14.04	8.42	11.84	28.08
Cooling - Disaforma									
Pouring/Casting - Pallet	1,636	4.20	2.06	2.06	6.00	3.44	1.69	1.69	4.91
Cooling - Pallet		1.40	1.40	1.40		1.15	1.15	1.15	
Total Future Projected Actual Emissions						**29.87**	**20.18**	**23.60**	**38.75**

ATPA Summary				
	PM	PM10	PM2.5	CO
ATPA Emissions Summary (tpy)* **	0.00	0.00	0.00	0.00
PSD Major Source Modification Threshold	25	15	10	100

Notes

*Based on 2011 and 2012 data provided by the source, which represents the worst case emissions for the past 10 years.

*The highest projected throughput five (5) years after the modification was provided by the source and is estimated to be in 2021.

***For the purposes of ATPA, negative values are indicated as zeros.

Methodology

Baseline Actual Emissions (tons/yr) = Emission Factor (lb/ton) x Two Year Average Throughput (tons/yr) x 1/2,000 (ton/lb)
Future Projected Actual Emissions (tons/yr) = Emission Factor (lb/ton) x Future Expected Annual Throughput (tons/yr) x 1/2,000 (ton/lb)
ATPA Emissions Summary (tons/yr) = Total Future Projected Actual Emissions (ton/yr) - Total Baseline Actual Emissions (ton/yr)

Appendix A: Emission Calculations
Summary of HAPs Emissions

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

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)	Form-aldehyde (tons/yr)	Hexane (tons/yr)	Toluene (tons/yr)	MDI (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	0.10
Melting (three (3) electric induction scrap iron furnaces and one (1) electric induction steel furnace)	0.007	0.001	0.011	0.002	0.001	0.0003	0.256	0.641	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.92
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
Pouring/Casting - Total	0.053	0.004	0.092	0.018	0.008	0.001	0.531	0.000			0.000		0.000								
Castings Cooling - total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.572	0.030	0.000	1.928	0.000	3.365	0.041	6.087	0.672	0.043	1.415	0.493	21.89
Shakeout (CCS)	0.040	0.003	0.070	0.014	0.006	0.001	0.405	0.000			0.000		0.000								
Casting Cleaning/Finishing - Total	0.170	0.013	0.299	0.058	0.027	0.004	0.118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.69
Mold Sand Handling (MSH)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
Isocure core making (4)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.000	0.000	0.021	2.102	0.000	0.000	0.000	0.000	0.000	0.000	2.35
Shell core making	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
Air set core machine (ACM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.23
Preheater Ladle Heaters Insignificant Combustion	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0025	0.0612	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.06
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
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
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
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
Insignficant 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
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
Insig maintenance welding, 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
Total	**0.277**	**0.022**	**0.487**	**0.095**	**0.044**	**0.007**	**1.386**	**0.641**	**6.57**	**0.48**	**0.061**	**1.93**	**0.02**	**5.47**	**0.041**	**6.09**	**0.672**	**0.043**	**1.41**	**0.493**	**26.2**

Limited HAPs Emissions

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)	Form-aldehyde (tons/yr)	Hexane (tons/yr)	Toluene (tons/yr)	MDI (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	0.000	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	0.101
Melting (three (3) electric induction scrap iron furnaces and one (1) electric induction steel furnace)	0.007	0.001	0.011	0.002	0.001	0.000	0.256	0.641	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.919
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
Pouring/Casting - disamatic	0.000	0.006	0.001	0.001	0.000	0.037	0.000	0.000			0.000		0.000								
Castings Cooling - disamatic	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			0.000		0.000								
Pouring/Casting - disaforma	0.013	0.001	0.023	0.005	0.002	0.000	0.135	0.000			0.000		0.000								
Castings Cooling - disaforma	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.016	0.028	0.000	1.841	0.000	2.959	0.038	5.977	0.613	0.041	1.378	0.470	20.37
Pouring/Casting - pallet	0.007	0.001	0.012	0.002	0.001	0.000	0.071	0.000			0.000		0.000								
Castings Cooling - pallet	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			0.000		0.000								
Shakeout (CCS)	0.040	0.003	0.070	0.014	0.006	0.001	0.405	0.000			0.000		0.000								
Casting Cleaning/Finishing - Total	0.170	0.013	0.299	0.058	0.027	0.004	0.118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.690
Mold Sand Handling (MSH)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
Isocure core making (4)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.000	0.000	0.021	2.102	0.000	0.000	0.000	0.000	0.000	0.000	2.348
Shell core making	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
Air set core machine (ACM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225
Preheater Ladle Heaters Insignificant Combustion	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	0.003	0.061	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
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
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
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
Insignficant 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
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
Insig maintenance welding, 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
Total	**0.245**	**0.026**	**0.431**	**0.084**	**0.039**	**0.044**	**1.060**	**0.641**	**6.02**	**0.48**	**0.061**	**1.84**	**0.02**	**5.06**	**0.038**	**5.98**	**0.613**	**0.041**	**1.38**	**0.470**	**24.7**

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

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to eight (8) shell core making machines

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

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.025
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	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	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	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	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	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	0.061
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	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	1.475
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	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	0.307
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	13.782

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

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

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.000
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	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	0.000
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	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	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	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	0.001
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	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	0.014
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	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	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	0.369

Continued next page

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

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

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

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.006
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	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	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	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	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	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	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	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	0.164
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	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	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	2.435

METHODOLOGY

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

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure machine (ICM-L10)

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
219000	Phenolic Urethane

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.003
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	0.586
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	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	0.115
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	0.048
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	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	0.014
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	0.427
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	0.091
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	0.038
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	0.024
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	1.353

Continued next page

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

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure machine (ICM-L10(II))

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
219000	Phenolic Urethane

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.003
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	0.586
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	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	0.115
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	0.048
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	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	0.014
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	0.427
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	0.091
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	0.038
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	0.024
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	1.353

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

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
219000	Phenolic Urethane

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.003
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	0.586
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	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	0.115
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	0.048
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	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	0.014
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	0.427
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	0.091
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	0.038
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	0.024
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	1.353

METHODOLOGY

HAPS emission rate (tons/yr) = Annual Usage (lbs/yr) * Emission Factor (lbs Chemical/lbs Index) * 1 ton/2000 lbs
Emission Factors from American Foundrymen's Society (10/94)
Index Material is Resin

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

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to eight (8) shell core making machines

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

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.025
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	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	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	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	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	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	0.061
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	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	1.475
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	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	0.307
Total HAPs	0.016174	0.012355	0.004318	0.001076	0.004574	0.021000	0.004777	0.031842	0.007364	0.015939	0.003943	11.038

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

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

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.000
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	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	0.000
Hydrogen Cyanide	0.000029	0.001053	0.001184	0.000118	0.000086	0.010526	0.000368	0.000607	0.003474	0.000175	0.000179	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	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	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	0.001
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	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	0.014
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	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	0.070
Total HAPs	0.021000	0.012355	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	0.479

Continued next page

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

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

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 (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	0.006
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	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	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	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	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	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	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	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	0.164
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	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	0.043
Total HAPs	0.016174	0.021000	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	4.139

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

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure machine (ICM-L10)

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
149629	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 (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	0.002
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	0.400
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	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	0.079
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	0.033
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	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	0.010
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	0.292
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	0.062
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	0.026
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	0.016
Total HAPs	0.016174	0.021000	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	1.571

Continued next page

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

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Non-metal HAP Emissions from Pouring, Cooling and Shakeout due to one (1) isocure machine (ICM-L10(II))

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
149629	Phenolic Urethane

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.002
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	0.400
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	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	0.079
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	0.033
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	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	0.010
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	0.292
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	0.062
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	0.026
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	0.016
Total HAPs	0.016174	0.021000	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	1.571

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

Annual Usage of Index Material (lbs/yr)	Binder System Isocure
149629	Phenolic Urethane

	Binder System Type Emission Factors => Lbs. of Chemical Released to Air per Lbs. of Index											***
Pollutant	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 (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	0.002
Benzene	0.011209	0.005351	0.001002	0.000611	0.002344	0.006667	0.000648	0.004534	0.000537	0.005336	0.001410	0.400
Formaldehyde	0.000010	0.000022	0.000006	0.000004	0.000096	0.000035	0.000267	0.000065	0.000009	0.000106	0.000169	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	0.079
M-Xylene	0.000097	0.000439	0.000121	0.000021	0.000239	0.000585	0.002227	0.000243	0.000032	0.002522	0.000094	0.033
Napthalene	0.000049	0.000022	0.000030	0.000021	0.000048	0.000058	0.000040	0.000040	0.000032	0.000037	0.000005	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	0.010
Phenol	0.000975	0.003904	0.000203	0.000131	0.000057	0.002456	0.000024	0.000101	0.000016	0.000110	0.000273	0.292
Toluene	0.000634	0.000833	0.000182	0.000063	0.000478	0.002807	0.000210	0.008826	0.000032	0.001535	0.000282	0.062
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	0.026
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	0.016
Total HAPs	0.016174	0.021000	0.004318	0.001076	0.004574	0.026222	0.004777	0.031842	0.007364	0.015939	0.003943	1.571

METHODOLOGY

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

Appendix A: Emission Calculations
Scrap Handling and Melting

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Control Efficiency (%)	Eac (ton/yr)
	7.5	PM	0.60	19.71		19.71
Scrap and charge handling		PM10	0.36	11.83		11.83
		PM2.5	0.36	11.83		11.83
		SO2	0.00	0.00		0.00
		NOx	0.00	0.00		0.00
SCC# 3-04-003-15		VOC	0.00	0.00		0.00
FIRE 6.01		CO	0.00	0.00		0.00
AP-42 Ch. 12.10		chromium	0.00023	0.0076		0.0076
Fifth edition 1995		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)	Control Efficiency (%)	Eac (ton/yr)
	6.5	PM	0.90	25.62		25.62
		PM-10	0.86	24.48		24.48
Iron Melting - Electric Induction		PM-2.5	0.86	24.48		24.48
Furnaces (IF1, IF2 & IF3)		SO2	0.00	0.00		0.00
Source of Criteria		NOx	0.00	0.00		0.00
Pollutant Factors:		VOC	0.00	0.00		0.00
EPA SCC# 3-04-003-03		CO	0.00	0.00		0.00
FIRE 6.01		chromium	0.00023	0.0065		0.0065
AP-42 Ch. 12.10		cobalt	0.00002	0.0006		0.0006
Fifth edition 1995		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)	Control Efficiency (%)	Eac (ton/yr)
Magnesium Treatment/Inoculation	7.5	PM	1.80	59.13		59.13
Source of Criteria		PM-10	1.80	59.13		59.13
		PM-2.5	1.80	59.13		59.13
Pollutant Factors:		SO2	0.00	0.00		0.00
FIRE 6.01		NOx	0.00	0.00		0.00
SCC# 3-04-003-21		VOC	0.01	0.164		0.164
AP-42 Ch 12.10		CO	0.00	0.00		0.00
Fifth edition 1995		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

Appendix A: Emission Calculations
Pouring and Cooling

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

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

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Pouring/Casting - Total	7.5	PM	4.20	138.0
Source of Criteria		PM10	2.06	67.7
		PM2.5	2.06	67.7
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.7
FIRE 6.01	FIRE 5.0	NOx	0.01	0.3
SCC# 3-04-003-18	FIRE 5.0	VOC	0.14	4.6
(except as noted)		CO	6.00	197.1
		chromium	0.0016	0.053
		cobalt	0.00013	0.004
		nickel	0.00281	0.092
		arsenic	0.00055	0.018
		cadmium	0.00025	0.008
		selenium	0.00004	0.001
		Lead	0.01617	0.531
Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Castings Cooling - total	7.5	PM	1.40	46.0
Source of Criteria		PM10	1.40	46.0
		PM2.5	1.40	46.0
Pollutant Factors:		SO2	0.00	0.0
FIRE 6.01		NOx	0.00	0.0
SCC# 3-04-003-25		VOC	0.00	0.0
		CO	---	0.0
		Lead	---	0.00

Without Bottleneck

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Pouring/Casting - disamatic	5.0	PM	4.20	92.0
Source of Criteria		PM10	2.06	45.1
		PM2.5	1.00	21.9
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.438
FIRE 6.01		NOx	0.01	0.219
SCC# 3-04-003-18		VOC	0.14	3.07
(except as noted)		CO	6.00	131
		chromium	0.0016	0.035
		cobalt	0.00013	0.003
		nickel	0.00281	0.062
		arsenic	0.00055	0.012
		cadmium	0.00025	0.005
		selenium	0.00004	0.001
		Lead	0.01617	0.354
Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Castings Cooling - disamatic	5.0	PM	1.40	30.7
Source of Criteria		PM10	1.40	30.7
		PM2.5	1.40	30.7
Pollutant Factors:		SO2	0.00	0.00
FIRE 6.01		NOx	0.00	0.00
SCC# 3-04-003-25		VOC	0.00	0.00
		CO	---	0.00
		Lead	---	0.00

Appendix A: Emission Calculations
Pouring and Cooling

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Without Bottleneck - continued

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Pouring/Casting - disaforma	20.0	PM	4.20	367.9
Source of Criteria		PM10	2.06	180.5
		PM2.5	1.00	87.6
Pollutant Factors:	FIRE 5.0	SO2	0.02	1.8
FIRE 6.01		NOx	0.01	0.9
SCC# 3-04-003-18		VOC	0.14	12.3
(except as noted)		CO	6.00	525.6
		chromium	0.0016	0.1
		cobalt	0.00013	0.0
		nickel	0.00281	0.2
		arsenic	0.00055	0.0
		cadmium	0.00025	0.0
		selenium	0.00004	0.0
		Lead	0.01617	1.4

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Castings Cooling - disaforma	20.0	PM	1.40	122.6
Source of Criteria		PM10	1.40	122.6
		PM2.5	1.40	122.6
Pollutant Factors:		SO2	0.00	0.0
FIRE 6.01		NOx	0.00	0.0
SCC# 3-04-003-25		VOC	0.00	0.0
		CO	---	0.0
		Lead	---	0.0

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Pouring/Casting - pallet	1.0	PM	4.20	18.4
Source of Criteria		PM10	2.06	9.0
		PM2.5	1.00	4.4
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.1
FIRE 6.01		NOx	0.01	0.0
SCC# 3-04-003-18		VOC	0.14	0.6
(except as noted)		CO	6.00	26.3
		chromium	0.0016	0.0
		cobalt	0.00013	0.0
		nickel	0.00281	0.0
		arsenic	0.00055	0.0
		cadmium	0.00025	0.0
		selenium	0.00004	0.0
		Lead	0.01617	0.1

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Castings Cooling - pallet	1.0	PM	1.40	6.1
Source of Criteria		PM10	1.40	6.1
		PM2.5	1.40	6.1
Pollutant Factors:		SO2	0.00	0.0
FIRE 6.01		NOx	0.00	0.0
SCC# 3-04-003-25		VOC	0.00	0.0
		CO	---	0.0
		Lead	---	0.0

Methodology:
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

Appendix A: Emission Calculations
Pouring and Cooling
Maximum per Line

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

These calculations are the limited 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 next page.

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting - disamatic	4,613	PM	4.20	9.69	none		9.7
Source of Criteria	326 IAC 2-2	PM10	2.06	4.75			4.8
		PM2.5	2.06	4.75			4.8
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.05			0.046
FIRE 6.01	FIRE 5.0	NOx	0.01	0.02			0.023
SCC# 3-04-003-18	FIRE 5.0	VOC	0.14	0.32			0.32
(except as noted)	326 IAC 2-2	CO	6.00	13.84			13.8
		chromium	0.0016	0.00			0.004
		cobalt	0.00013	0.00			0.000
		nickel	0.00281	0.01			0.006
		arsenic	0.00055	0.00			0.001
		cadmium	0.00025	0.00			0.001
		selenium	0.00004	0.00			0.000
		Lead	0.01617	0.04			0.037

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling - disamatic	4,613	PM	1.40	3.2	none		3.2
		PM10	1.40	3.2			3.2
Source of Criteria		PM2.5	1.40	3.2			3.2
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

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting/Cooling - disaforma	16,665	PM	3.00	24.998			25.0
Source of Criteria	326 IAC 2-2	PM10	1.80	14.999			15.0
		PM2.5	2.53	21.081			21.1
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.17			0.2
FIRE 6.01	FIRE 5.0	NOx	0.01	0.08			0.083
SCC# 3-04-003-18	FIRE 5.0	VOC	0.14	1.17			1.17
(except as noted)	326 IAC 2-2	CO	6.00	50.00			50.0
		chromium	0.0016	0.01			0.013
		cobalt	0.00013	0.00			0.001
		nickel	0.00281	0.02			0.023
		arsenic	0.00055	0.00			0.005
		cadmium	0.00025	0.00			0.002
		selenium	0.00004	0.00			0.000
		Lead	0.01617	0.13			0.135

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting - pallet	1.0	PM	4.20	18.4			18.4
Source of Criteria		PM10	2.06	9.02			9.02
		PM2.5	2.06	9.02			9.02
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.088			0.088
FIRE 6.01	FIRE 5.0	NOx	0.01	0.044			0.044
SCC# 3-04-003-18	FIRE 5.0	VOC	0.14	0.613			0.613
(except as noted)		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	1.0	PM	1.40	6.13	none		6.13
Source of Criteria		PM10	1.40	6.13	none		6.13
		PM2.5	1.40	6.13			6.13
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

Appendix A: Emission Calculations
Shakeout, Cleaning and Finishing

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

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	7.5	PM	3.20	105.1	BH DC2	95.00%	5.26
Source of Criteria		PM10	2.24	73.58	BH DC2	95.00%	3.68
		PM2.5	2.24	73.58	BH DC3	95.00%	3.68
Pollutant Factors:		SO2	0.00	0.00			0.00
FIRE 6.01		NOx	0.00	0.00			0.00
SCC# 3-04-003-31		VOC	1.20	39.42			39.42
AP-42 Ch. 12.10		CO	6.00	197.10			197.1
Fifth edition 1995		chromium	0.00122	0.04	BH DC2	95.00%	0.0020
		cobalt	0.0001	0.00	BH DC2	95.00%	0.0002
		nickel	0.00214	0.07	BH DC2	95.00%	0.0035
		arsenic	0.00042	0.01	BH DC2	95.00%	0.0007
		cadmium	0.00019	0.01	BH DC2	95.00%	0.0003
		selenium	0.00003	0.00	BH DC2	95.00%	0.00005
		Lead	0.01232	0.40	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	6.0	PM	17.00	446.6	Lowest CE	95.00%	22.34
and Finishing - total		PM10	1.70	44.7		95.00%	2.234
		PM2.5	1.70	44.7		95.00%	2.234
Source of Criteria		SO2	0.00	0.0			0.00
Pollutant Factors:		NOx	0.00	0.0			0.00
FIRE 6.01		VOC	0.00	0.0			0.00
SCC# 3-04-003-40		CO	0.00	0.0			0.00
AP-42 Ch. 12.10		chromium	0.00646	0.170		95.00%	0.0085
Fifth edition 1995		cobalt	0.00051	0.013		95.00%	0.0007
		nickel	0.01139	0.299		95.00%	0.0150
		arsenic	0.00221	0.058		95.00%	0.0029
		cadmium	0.00102	0.027		95.00%	0.0013
		selenium	0.00017	0.004		95.00%	0.00022
		Lead	0.0045	0.118		95.00%	0.0059

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)	1.0	PM	17.00	74.46	DC7	95.00%	3.72
		PM10	1.70	7.45		95.00%	0.372
		PM2.5	1.70	7.45			
Source of Criteria		SO2	0.00	0.000			0.00
Pollutant Factors:		NOx	0.00	0.000			0.00
FIRE 6.01		VOC	0.00	0.000			0.00
SCC# 3-04-003-40		CO	0.00	0.000			0.00
AP-42 Ch. 12.10		chromium	0.00646	0.028		95.00%	0.0014
Fifth edition 1995		cobalt	0.00051	0.002		95.00%	0.0001
		nickel	0.01139	0.050		95.00%	0.0025
		arsenic	0.00221	0.010		95.00%	0.0005
		cadmium	0.00102	0.004		95.00%	0.0002
		selenium	0.00017	0.001		95.00%	0.0000
		Lead	0.0045	0.020		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	5.75	PM	17.00	428.15	DC6	99.00%	4.28
(grinders, GR1-GR9)		PM10	1.70	42.81		99.00%	0.428
		PM2.5	1.70	42.81			
Source of Criteria		SO2	0.00	0			0.00
Pollutant Factors:		NOx	0.00	0			0.00
FIRE 6.01		VOC	0.00	0			0.00
SCC# 3-04-003-40		CO	0.00	0			0.00
AP-42 Ch. 12.10		chromium	0.00646	0.163		99.00%	0.0016
Fifth edition 1995		cobalt	0.00051	0.013		99.00%	0.0001
		nickel	0.01139	0.287		99.00%	0.0029
		arsenic	0.00221	0.056		99.00%	0.0006
		cadmium	0.00102	0.026		99.00%	0.0003
		selenium	0.00017	0.004		99.00%	0.00004
		Lead	0.0045	0.113		99.00%	0.0011

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)	6.0	PM	17.00	446.76	DC6	99.00%	4.47
		PM10	1.70	44.68		99.00%	0.447
		PM2.5	1.70	44.68			
Source of Criteria		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.01		VOC	0.00	0.00			0.00
SCC# 3-04-003-40		CO	0.00	0.00			0.00
AP-42 Ch. 12.10		chromium	0.00646	0.170		99.00%	0.0017
Fifth edition 1995		cobalt	0.00051	0.013		99.00%	0.0001
		nickel	0.01139	0.299		99.00%	0.0030
		arsenic	0.00221	0.058		99.00%	0.0006
		cadmium	0.00102	0.027		99.00%	0.0003
		selenium	0.00017	0.004		99.00%	0.0000
		Lead	0.0045	0.118		99.00%	0.0012

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	0.60	PM	17.00	44.68	DC6	99.00%	0.45
(Semi--auto grinders, Maus 300 and		PM10	1.70	4.47		99.00%	0.045
Maus 600)		PM2.5	1.70	4.47			
Source of Criteria		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.01		VOC	0.00	0.00			0.00
SCC# 3-04-003-40		CO	0.00	0.00			0.00
AP-42 Ch. 12.10		chromium	0.00646	0.017		99.00%	0.0002
Fifth edition 1995		cobalt	0.00051	0.001		99.00%	0.0000
		nickel	0.01139	0.030		99.00%	0.0003
		arsenic	0.00221	0.006		99.00%	0.0001
		cadmium	0.00102	0.003		99.00%	0.0000
		selenium	0.00017	0.000		99.00%	0.00000
		Lead	0.0045	0.012		99.00%	0.0001

Appendix A: Emission Calculations
Cleaning and Finishing PSD Minor Limits

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

		PSD Minor Limit (lb/hr)			Limited Emissions (tons/yr)		
Emission Unit ID	**Control**	**PM**	**PM10**	**PM2.5**	**PM**	**PM10**	**PM2.5**
Grinders (GR1-GR9)	DC6	1.96	1.60	-	8.58	7.01	-
Shot Blast Unit (CCL 2)		1.96	1.6	1.6	8.58	7.01	7.01
Grinder (Maus 300)							
Grinder (Maus 600)							

Limited Emissions (tons/yr) = PSD Minor Limit (lb/hr)*8760 (hrs/yr)*2000 (lbs/ton)

Appendix A: Emission Calculations
Sand Handling

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Mold Sand Handling

Throughput tons/hr: 100 PM Control: 95%

Process new muller, mold sand handling (MSH)	PM	PM10	PM2.5
Grain Loading (gr/dcfm)	0.015	0.015	0.015
Flow Rate (acfm)	26000	26000	26000
Potential Emissions before controls tons/yr	1282.6	1282.6	1282.6
Potential Emissions after controls tons/yr	14.64	14.64	14.64

Core Sand Handling Processes

Process: **CSH-North**	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produce	Ebc (ton/yr)	Type of control	ontrol Efficien (%)	Eac (ton/yr)
Sand Handling for ICM-1	2.75	PM	3.6	43.4	small filters	95%	2.17
Source of Criteria		PM10	0.54	6.50		95%	0.325
Pollutant Factors: FIRE		PM2.5	0.54	6.50		95%	0.325
EPA SCC# 3-04-003-50							

Process: **CSH-South**	Rate (tons sand/hr)	Pollutant	EF (lb/ton produce	PTE (tons/yr)
Sand Handling for ICM-L20	1.5	PM	3.6	23.65
Source of Criteria		PM10	0.54	3.55
Pollutant Factors: FIRE		PM2.5	0.54	3.55
EPA SCC# 3-04-003-50				

Process: **Shell Cores, SSH-North**	Rate (tons sand/hr)	Pollutant	EF (lb/ton produce	PTE (tons/yr)	Type of control	ontrol Efficien (%)	Eac (ton/yr)
Source of Criteria	2.0	PM	3.6	31.54	filter	95%	1.58
Pollutant Factors: FIRE		PM10	0.54	4.73		95%	0.24
EPA SCC# 3-04-003-50		PM2.5	0.54	4.73		95%	0.24

Appendix A: Emission Calculations
Isocure Core Machines
$PM/PM_{10}/PM_{2.5}$

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

	Uncontrolled		
Emission Unit ID #	Capacity (tons/hr)	$PM/PM_{10}/PM_{2.5}$ Emissions Factor (lbs/ton)	Potential PM/PM_{10} (tons/yr)
ICM-L10(1)	1.50	1.10	7.23
ICM-L20(1)	1.50	1.10	7.23
ICM-L10(II)	1.50	1.10	7.23
ICM-L20(II)	1.50	1.10	7.23
Total:			28.91

To avoid 326 IAC 2-2:

	Uncontrolled			Limited		
Emission Unit ID #	Capacity (tons/hr)	$PM/PM_{10}/PM_{2.5}$ Emissions Factor (lbs/ton)	Potential $PM/PM_{10}/PM_{2.5}$ (tons/yr)	Capacity (tons/yr)	Capacity (tons/hr)	Limited PM_{10} Emissions (tons/yr)
ICM-L10(1)	1.50	1.10	7.23	9090	1.038	4.9995
ICM-L20(1)	1.50	1.10	7.23	9090	1.038	4.9995
ICM-L10(II)	1.50	1.10	7.23	9090	1.038	4.9995
ICM-L20(II)	1.50	1.10	7.23	9090	1.038	4.9995

Methodology
Emission factors from AP-42 Chapter 12.10, Table 12.10-7 for core making.
Potential Emissions (tons/yr) = Throughput (tons/hr) x Emission Factor (lbs/ton) x 8760 (hrs/yr) x (1 ton/2000 lbs)
ICM-L10, ICM-L10(II) and ICM-L20(II) were part of same modification and limited for PM10 to less than significant levels (< 15 ton/yr).

Appendix A: Emission Calculations
Core Making

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

Potential Emissions based on resin and catalyst usage

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin (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)
North Isocure								
ICM-L10	2010	1.5	0.8%	1.5	3.00	9.86	19.71	29.6
South Isocure								
ICM-L20	2006	1.5	1.5%	1.5	3.00	9.86	19.7	29.6
ICM-L10 (II)	2011	1.5	0.8%	1.5	3.00	9.86	19.71	29.6
ICM-L20 (II)	2011	1.5	0.8%	1.5	3.00	9.86	19.71	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 & 2005	2	3.0%	1.5	0.00	13.14	0.0	13.14
Total						62.4	78.8	141.3

*The catalyst does not contain HAPs

Machine	Maximum Resin Use (ton/yr)	Percent Part 1 Resin %	Percent Part 2 Resin %	Weight % VOC	Weight % MDI	Weight % Phenol	Weight % Formaldehyde
Each (4) Isocure Core Machines							
Biocure 703 UCB Part 1	105					5%	
Biocure 302 UCB Part 2	105				50%		
ACM (Air Set Cores)		75%	25%	25%	0%	0%	0%
SCM (Shell Cores)							

Note: The isocure catalyst contains no hazardous air pollutants.

Machine	MDI Emissions (tons/yr)	Phenol Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Total HAP Emissions (tons/yr)
Each (4) Isocure Core Machines				
Biocure 703 UCB Part 1	0.0	5.3	0.0	5.3
Biocure 302 UCB Part 2	52.6	0.0	0.0	52.6
All (4) Core HAPs	210.2	21.0	0.0	57.8
ACM (Air Set Cores)	0	0	2.250	2.25
SCM (Shell Cores)	0	0	0	0.00
Total	210.2	21.0	2.3	233.5
Portion Reacted %	99.99%	90%	90%	
Portion Remaining in Core	0.01%	10%	10%	
PTE (each) ton/yr	0.0053	0.5256	0.225	
PTE (all core) ton/yr	0.02	2.10	0.23	2.35

Methodology

Emission factors based on OCMA study. Conservative estimate of uncontrolled emissions so that no stack test would be necessary to verify emissions.
Potential VOC Emissions from Resin (tons/yr)= Capacity (tons of cores/yr) x Emission Factor (lbs of resin/ton of cores) x 8760 (hrs/yr) / 2000 (lbs/ton)
Potential VOC Emissions from Catalyst (tons/yr) = Capacity (tons of cores/yr) x Maximum Catalyst Usage (lbs of catalyst/ton of cores) x 8760 (hrs/yr) / 2000 (lbs/ton)
Total VOC Emissions (tons/yr) = VOC Emissions from resin (tons/yr) + VOC Emissions from Catalyst (tons/yr)
Core HAPs (tons/yr) = Maximum Resin Use (ton/yr) x HAP Weight %
HAP PTE (tons/yr) = Core HAPs (ton/yr) x Portion Remaining in core %

Appendix A: Emission Calculations
Core Making

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

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

Core Machines	Year Permitted	Resin usage limit (lbs/yr)	Resin Emission Factor lb VOC/lb Resin	Resin VOC (tons/yr)	Catalyst usage limit (lbs/yr)	Catalyst Emission Factor (lb VOC/lb Cat)	Catalyst VOC PTE (tons/yr)	VOC PTE (tons/yr)
ICM-L20(1)	2006	331128	0.05	8.28	33,113	1.00	16.56	24.8
ICM-L10(1)	2010	266,666	0.09	12.00	26,000	1.00	13.00	25.0
ICM-L10 (II)	2011	266,666	0.09	12.00	26,000	1.00	13.00	25.0
ICM-L20 (II)	2011	266,666	0.09	12.00	26,000	1.00	13.00	25.0

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

Core Machines	Year Permitted	Resin usage limit (lbs/yr)	Resin Emission Factor lb VOC/lb Resin	Resin VOC (tons/yr)	Catalyst usage limit (lbs/yr)	Catalyst Emission Factor (lb VOC/lb Cat)	Catalyst VOC PTE (tons/yr)	VOC PTE (tons/yr)
ICM-L20(1)	2006	331128	0.05	8.28	33,113	1.00	16.56	24.83
ICM-L10(1)	2010	149,629	0.09	6.73	13,200	1.00	6.60	13.33
ICM-L10 (II)	2011	149,629	0.09	6.73	13,200	1.00	6.60	13.33
ICM-L20 (II)	2011	149,629	0.09	6.73	13,200	1.00	6.60	13.33

Methodology

Emission factors based on OCMA study. Conservative estimate of uncontrolled emissions so that no stack test would be necessary to verify emissions.
Potential VOC Emissions from Resin (tons/yr)= Capacity (tons of cores/yr) x Emission Factor (lbs of resin/ton of cores) x 8760 (hrs/yr) / 2000 (lbs/ton)
Potential VOC Emissions from Catalyst (tons/yr) = Capacity (tons of cores/yr) x Maximum Catalyst Usage (lbs of catalyst/ton of cores) x 8760 (hrs/yr) / 2000 (lbs/ton)
Total VOC Emissions (tons/yr) = VOC Emissions from resin (tons/yr) + VOC Emissions from Catalyst (tons/yr)
Core HAPs (tons/yr) = Maximum Resin Use (ton/yr) x HAP Weight %
HAP PTE (tons/yr) = Core HAPs (ton/yr) x Portion Remaining in core %
ICM-L10, ICM-L10(II) and ICM-L20(II) were part of same modification and limited to less than significant levels (< 40 ton/yr).

Appendix A: Emission Calculations
Natural Gas Combustion Only

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

	Pollutant						
	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	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

	Heat Input Capacity	Potential Throughput	Potential Emission in tons/yr						
Equipment	**MMBtu/hr**	**MMCF/yr**	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
Scrap Charge Preheater	1.16	10.1616	0.01	0.04	0.04	0.00	0.51	0.03	0.43
Ladle heaters	2.60	22.776	0.02	0.09	0.09	0.01	1.14	0.06	0.96
Insignificant	4.00	35.04	0.03	0.13	0.13	0.01	1.75	0.10	1.47
Total	**7.76**	**67.98**	**0.06**	**0.26**	**0.26**	**0.02**	**3.40**	**0.19**	**2.86**

HAPs - Organics

	Benzene	ene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	0.0021	0.0012	0.0750	1.8000	0.0034
Potential Emission in tons/yr	0.0001	0.0000	0.003	0.061	0.0001

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Emission Factor in lb/MMcf	0.0005	0.0011	0.0014	0.0004	0.0021	HAPs
Potential Emission in tons/yr	0.00002	0.0000	0.0000	0.00001	0.0001	**0.06**

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
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
Natural Gas Combustion Only
MM BTU/HR <100
Greenhouse Gas Emissions

Company Name: Manchester Metals, LLC
Source Address: 205 Wabash Road, North Manchester, Indiana 46962
Significant Source Modification No: T 169-36915-00019
Significant Permit Modification No: T 169-37096-00019
Reviewer: Renee Traivaranon

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	2,102	0.0	0.0
Summed Potential Emissions in tons/yr	2,102		
CO2e Total in tons/yr	2,102		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
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Michael R. Pence
Governor

Carol S. Comer
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Mr. David Boyd
Manchester Metals LLC
205 Wabash Road
North Manchester, Indiana 46962

DATE: July 18, 2016

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

SUBJECT: Final Decision
Title V – Significant Permit Modification
169-37096-00019

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
W. D. Gabbard, Gabbard Environmental Services, Inc.
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 2/17/2016

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

July 18, 2016

TO: North Manchester Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Manchester Metals LLC
Permit Number: 169-37096-00019

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 2/17/2016

Mail Code 61-53

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2		North Manchester Public Library 405 N. Market St North Manchester IN 46962 *(Library)*									
3		Ms. Flo Rahlstrom Wabash County Animal Shelter 810 Manchester Avenue Wabash IN 46992 *(Affected Party)*									
4		Wabash County Commissioners 1 West Hill Street Wabash IN 46992 *(Local Official)*									
5		Wabash County Health Department 89 W. Hill, Memorial Hall Wabash IN 46992-3184 *(Health Department)*									
6		Ted Little Wabash County Council 1076 West 900 North North Manchester IN 46962 *(Affected Party)*									
7		W.D. Gabbard Gabbard Environmental Services, Inc. 7611 Hope Farm Road Fort Wayne IN 46815 *(Consultant)*									
8		North Manchester Town Council and Town Manager 103 East Main Street North Manchester IN 46962 *(Local Official)*									
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