



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: January 8, 2009

RE: Weil McLain, A United Dominion Company / 091-27013-00020

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

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 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.

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 impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

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

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

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



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Mr. Gary Connor
Weil McLain, A United Dominion Company
500 Blaine Street
Michigan City, IN 46360

January 8, 2009

Re: 091-27013-00020
Significant Permit Modification to
Part 70 Renewal No.: T091-24543-00020

Dear Mr. Connor:

Weil McLain has a Part 70 Operating Permit was issued for a gray iron foundry on November 24, 2008. A letter requesting changes to this permit was received on September 24, 2008. 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.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

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 Josiah Balogun, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Josiah Balogun or extension (4-5257), or dial (317) 234-5257.

Sincerely,

Tripurari P. Sinha, Ph.D., Section Chief
Permits Branch
Office of Air Quality

Attachments:

Updated Permit
Technical Support Document
PTE Calculations

JB

cc: File – LaPorte County
LaPorte County Health Department
U.S. EPA, Region V
Regional Office
Air Compliance Inspector
Compliance Data Section



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(317) 232-8603
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Part 70 Operating Permit Renewal OFFICE OF AIR QUALITY

Weil-McLain, A United Dominion Company
500 Blaine Street
Michigan City, Indiana 46360

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T091-24543-00020	
Issued by: Tripurari P. Sinha, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: November 24, 2008 Expiration Date: November 24, 2013

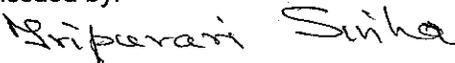
Significant Permit Modification No.: T091-27013-00020	
Issued by:  Tripurari P. Sinha, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: January 8, 2009 Expiration Date: November 24, 2013

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Certification

Emergency Occurrence Report

Part 70 Usage Report

Quarterly Deviation and Compliance Monitoring Report

SECTION A

SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary Gray Iron Foundry.

Source Address:	500 Blaine Street, Michigan City, Indiana 46360
Mailing Address:	500 Blaine Street, Michigan City, IN 46360
General Source Phone Number:	219-879-6561
SIC Code:	3321
County Location:	Laporte
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) natural gas fired pre-heater, constructed in 2007, with a maximum capacity of 15.8 million (MM) British thermal units (Btu) per hour, with a maximum metal throughput of 20 tons per hour, controlled by a dust collector, identified as 39-DC-4, exhausting through stack 39-DC-4;
- (b) four (4) electric induction furnaces, identified as 1, 2, 3, and 4, constructed in 1991, each capable of melting a maximum of 5 tons per hour of metal, with emissions from metal charging, each furnace controlled by a dust collector, identified as 39-DC-4, exhausting through stack 39-DC-4;
- (c) one (1) metal charging system, constructed prior to 1977 and modified in 1991, processing a maximum of 20 tons of metal per hour, exhausting inside the building; and
- (d) one (1) electric holding furnace, constructed in 1971, with a maximum molten metal storage capacity of 20 tons, the transfer of metal from the carrier ladle to the holding furnace exhausts through stack 36-E-24.
- (e) one (1) mold making operation, identified as A-Line Molding consisting of the following:
 - (1) one (1) 250 ton capacity holding silo, identified as A-Line Holding Silo, constructed in 1984, controlled by a baghouse, identified as 36-1-DC-8, exhausting through stack 36-1-DC-8, and one (1) 50 ton capacity bond silo, constructed in 1984, controlled by a bin vent;
 - (2) one (1) green sand muller, identified as A-Line Muller, constructed in 1984, with a maximum green mold sand throughput of 200 tons per hour, controlled by a baghouse, identified as 36-1-DC-8, exhausting through stack 36-1-DC-8;
 - (3) one (1) metal pouring operation, identified as A-Line Pouring, constructed in

- 1964, with a maximum throughput of 24 tons per hour of molten metal, and a maximum throughput of 10 tons of core sand per hour, exhausting through stack 36-E-12;
- (4) one (1) metal cooling operation, identified as A-Line Cooling, constructed in 1964, with a maximum throughput of 24 tons per hour of molten metal, and a maximum throughput of 10 tons of core sand per hour, exhausting through exhaust fans 32-E-2 and 32-E-1; and
 - (5) one (1) mold and casting shakeout operation, identified as A-Line Shakeout, constructed in 1964, with a maximum metal casting throughput of 24 tons per hour, and a maximum throughput of 10 tons of core sand per hour, controlled by a baghouse identified as 36-1-DC-8, exhausting through stack 36-1-DC-8;
- (f) one (1) mold making operation, identified as B-Line Molding consisting of the following:
- (1) one (1) 75 ton capacity holding silo, identified as B-Line Holding Silo, constructed in 1987, controlled by a baghouse, identified as 36-1-DC-7, exhausting through stack 36-1-DC-7, and one (1) 50 ton capacity bond silo, constructed in 1987, controlled by a bin vent;
 - (2) one (1) green sand muller, identified as B-Line Muller, constructed in 1987, with a maximum green mold sand throughput of 100 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, exhausting through stack 36-1-DC-7;
 - (3) one (1) metal pouring operation, identified as B-Line Pouring, constructed in 1986, with a maximum throughput of 9 tons per hour of molten metal, and a maximum throughput of 4 tons of core sand per hour, exhausting through stack 36-E-5;
 - (4) one (1) metal cooling operation, identified as B-Line Cooling, constructed in 1986, with a maximum throughput of 9 tons per hour of molten metal, and a maximum throughput of 4 tons of core sand per hour, exhausting through stack 36-E-6; and
 - (5) one (1) mold shakeout operation, identified as B-Line Shakeout, constructed in 1987, with a maximum metal casting throughput of 9 tons per hour, and a maximum throughput of 4 tons of core sand per hour, controlled by a baghouse, identified as 36-1-DC-7, exhausting through stack 36-1-DC-7.
- (g) one (1) mold making operation, identified as Floor Molding consisting of the following:
- (1) one (1) High Speed Continuous Sand Mixer, identified as Mixer and associated High Speed Continuous Sand Mixer hopper, constructed in 2001, with a maximum mold sand throughput of 42 tons per hour, with the hopper controlled by a baghouse, identified as 30-DC-6, exhausting through stack 30-DC-6;
 - (2) one (1) metal pouring operation, identified as Floor Pouring, constructed in 1922, with a maximum throughput of 6 tons per hour of molten metal, a maximum throughput of 3 tons of core sand per hour, and a maximum throughput of 26 tons of mold sand per hour, exhausting inside the building;
 - (3) one (1) metal cooling operation, identified as Floor Cooling, constructed in 1922, with a maximum throughput of 6 tons per hour of molten metal, with a maximum throughput of 3 tons of core sand per hour, and a maximum throughput of 26 tons of mold sand per hour, exhausting inside the building; and

- (4) one (1) mold shakeout operation, identified as Floor Shakeout, constructed in 1922, with a maximum metal casting throughput of 6 tons per hour, with a maximum throughput of 3 tons of core sand per hour, and a maximum throughput of 26 tons of mold sand per hour. The Floor Shakeout emission is uncontrolled and exhausting inside the building.
- (h) one (1) casting knockout station, identified as Floor Knockout Station, constructed in 1965, with a maximum throughput of 15 tons of iron castings per hour, controlled by a baghouse identified as 8-DC-2, and exhausting inside the building;
- (i) one (1) Wheelabrator shot blast machine, identified as Shot Blast, constructed in 1990, with a maximum throughput of 31 tons of iron castings per hour, controlled by a baghouse, identified as 36-DC-8, and exhausting inside the building;
- (j) one (1) Chill Iron shot blast machine, identified as Chill Iron Shot Blast, constructed in 1972, with a maximum throughput of 3,500 pounds of castings per hour, controlled by a baghouse, identified as 8-DC-2, and exhausting inside the building; and
- (k) one (1) paint spray booth, identified as Spray Painting, constructed in 1982, using a high volume low pressure (HVLP) coating application system, using a maximum of 9.8 pounds of coating per hour to coat metal base boards and a maximum of 10 gallons per year of paint thinner, with dry filters for particulate matter overspray control, and exhausting through stack 5-E-1.
- (l) One (1) indoor scrap handling operation, constructed in 2001, consisting of the following:
 - (1) one (1) metal scrap crusher, with a maximum scrap metal throughput of 15 tons per hour, controlled by a baghouse identified as 39-DC-5, and exhausting through a stack 39-DC-5;
 - (2) one (1) rotary reclaimer, with maximum scrap metal and sand throughputs of 15 and 10 tons per hour, respectively, controlled by a baghouse identified as 39-DC-5, and exhausting through stack 39-DC-5;
 - (3) one (1) sand and metal conveyor, with maximum scrap metal and sand throughputs of 15 and 10 tons per hour, respectively, controlled by a baghouse, identified as 39-DC-5, and exhausting through stack 39-DC-5; and
 - (4) one (1) enclosed conveyor system transporting spent sand to spent sand storage silo, with a maximum sand storage capacity of 100 tons, and a maximum sand throughput of 10 tons per hour, controlled by a baghouse, identified as 39-DC-5, and exhausting through stack 39-DC-5.
- (m) one (1) pneumatically conveyed raw sand storage silo, constructed in 2001 for the High Speed Continuous Sand Mixer, with a maximum sand storage capacity of 75 tons, and a maximum sand throughput of 10 tons per hour, controlled by a baghouse identified as 39-DC-5, and exhausting through stack 39-DC-5; and
- (n) two (2) 200 ton capacity core and mold sand silos identified as Silo #1 and Silo #2, both constructed in 1950, each with a maximum sand throughput of 16.8 tons per hour, both controlled by a baghouse, identified as 37-1-DC-3), exhausting through stack 37-1-DC-3.
- (o) one (1) Cold Box core making operation consisting of the following:
 - (1) one (1) Cold Box sand mixer, constructed in 1975, with a maximum sand throughput of 5.8 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;

- (2) one (1) Cold Box core machine, constructed in 1975, with a maximum throughput of 5.8 tons per hour of sand, with VOC and HAP emissions controlled by a natural gas-fired afterburner, identified as Afterburner J, with a maximum capacity of 1.4 MMBtu per hour, and exhausting through stack 37-1-E-2; and
 - (3) one (1) 10 ton capacity Cold Box line sand hopper and elevator, constructed in 1975, with a maximum sand throughput of 5.8 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7.
- (p) one (1) No Bake core making operation consisting of the following:
- (1) one (1) enclosed No Bake sand mixer, constructed in 1979, consisting of the No Bake Large Core Mixer and the No Bake Small Core Mixer, with a maximum sand throughput of 6.0 tons per hour;
 - (2) one (1) No Bake core machine, constructed in 1979, with a maximum throughput of 6.0 tons per hour of sand, and exhausting inside the building; and
 - (3) one (1) 10 ton capacity No Bake line sand hopper, constructed in 1979, with a maximum sand throughput of 6.0 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7.
- (q) one (1) Warm Box core making operation consisting of the following:
- (1) two (2) Warm Box mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;
 - (2) three (3) Warm Box core machines identified as Warm Box Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, and exhausting inside the building; and
 - (3) one (1) 10 ton capacity Warm Box line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7.

Weil McLain intends to convert Warm Box Core Making Process to a Phenolic Urethane cold box Making Process

- (q) One (1) Cold Box making operation, identified as CB-2, consisting of the following:
- (1) two (2) mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7 and exhausting through one (1) stack, identified as 36-1-DC-7;
 - (2) three (3) Cold Box core machines identified as Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, with an acid scrubber to control the catalyst emissions and exhausting inside the building; and

- (3) one (1) 10 ton capacity line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by one (1) baghouse, identified as 36-1-DC-7, and exhausting through one (1) stack, identified as 36-1-DC-7.
- (r) one (1) enclosed 10 ton capacity core and mold sand hopper, elevator, and conveyor, constructed in 1975, with a maximum sand throughput of 16.8 tons per hour; and

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

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

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; [326-IAC-6-3-2]
- (b) Grinding and machining operations 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 4,000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations [326 IAC 6-3].
- (c) Other categories with emissions below insignificant thresholds:
 - (1) one (1) machining operation, identified as Machining, modified in 1987, consisting:
 - (2) thirty (30) machines performing tapping, drilling, and reaming on the metal castings, with a maximum metal casting throughput of 20 tons per hour;
 - (3) six (6) reamer machines controlled by a baghouse, identified as 8-DC-1;
 - (4) three (3) grinding machines, controlled by a baghouse; and
 - (5) eight (8) CNC machines used for grinding, cutting and reaming, controlled by coolant.

Potential PM and PM₁₀ emissions before control are less than twenty-five (25) pounds per day.

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); and
- (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, T091-24543-00020, 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

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

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

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

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

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

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

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

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

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

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

and

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

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

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

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

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

- (A) A description of the emergency;
(B) Any steps taken to mitigate the emissions; and
(C) Corrective actions taken.

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided

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

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

- (b) 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 T091-24543-00020 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, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control)

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

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

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

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

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

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

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

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

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

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

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12] [40 CFR 72]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 operating permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]

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

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

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

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

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

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

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

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

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

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)

77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

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

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

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

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.
- (f) This condition does not apply to emission trades of SO₂ or NO_x under 326 IAC 21 or 326 IAC 10-4.

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

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

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

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to

assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

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

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

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

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

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

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

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

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

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

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

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

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

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

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

- (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

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

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

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

The statement must be submitted to:

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

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

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

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

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
 - (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;

- (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

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

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
 - (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).
 - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

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

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.0 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Entire Source

(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.0.1 Hazardous Air Pollutants (HAPs) Minor Limits

The Permittee shall comply with the following:

- (a) Lead emissions from the entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Manganese emissions from the entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Benzene emissions from entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) Phenol emissions from entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (e) The combined HAPs limit from the entire source shall be less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits in combination with other HAP emission from the source will limit the single and combined HAPs to less than 10 and 25 tons per year, respectively, and render 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants) not applicable to this source.

Compliance Determination

D.0.2 Hazardous Air Pollutants (HAPs) Compliance Determination

HAP Emission limits in condition D.0.1 shall be determined using the following equations:

Lead emissions = Lead emission calculated in Conditions [D.1.6(a) + D1.6(b) + D.2.6(a)(1) + D.3.6(a)(1) + D.4.7(a)(1) + D.5.4(a) + D.6.6(a)]

Manganese emissions = Manganese emission calculated in Conditions [D.1.6(c) + D1.6(d) + D.2.6(a)(2) + D.3.6(a)(2) + D.4.7(a)(2) + D.5.4(b) + D.6.6(b)]

Benzene emissions = Benzene emission calculated in Conditions [D.1.6 + D.2.6(b)(2) + D.3.6(b)(2) + D.4.7(b)(2) + D.5.4 + D.6.6]

Phenol emissions = Phenol emission calculated in Conditions [D.2.6(b)(1) + D.3.6(b)(1) + D.4.7(b)(1) + D.5.4 + D.6.6 + D.7.8(d)]

Xylene emissions = Xylene emission calculated in Condition [D.4.7(b)(4) + D.7.8(a)]

Total HAPs emissions = HAPs emission calculated in Conditions [D.1.6(e) + D1.6(f) + D.2.6(a)(3) + D.2.6(b)(3)+ D.3.6(a)(3) + D.3.6(b)(3) + D.4.7(a)(3) +

D.4.7(b)(3)(5) + D.5.4(c) + D.6.6(c) + D.7.8(b) + D.7.8(e)]

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

D.0.3 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.0.1, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) one (1) natural gas fired pre-heater, constructed in 2007, with a maximum capacity of 15.8 million (MM) British thermal units (Btu) per hour, with a maximum metal throughput of 20 tons per hour, controlled by a dust collector, identified as 39-DC-4, exhausting through stack 39-DC-4;
- (b) four (4) electric induction furnaces, identified as 1, 2, 3, and 4, constructed in 1991, each capable of melting a maximum of 5 tons per hour of metal, with emissions from metal charging, each furnace controlled by a dust collector, identified as 39-DC-4, exhausting through stack 39-DC-4;
- (c) one (1) metal charge handling system, constructed prior to 1977, and modified in 1991, processing a maximum of 20 tons of metal per hour, exhausting inside the building; and
- (d) one (1) electric holding furnace, constructed in 1971, with a maximum molten metal storage capacity of 20 tons, the transfer of metal from the carrier ladle to the holding furnace exhausts through stack 36-E-24.

(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 PSD Minor Limit [326 IAC 2-2]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007 and revised by Operating Permit T091-24543-00020:

- (a) The throughput of metal to all four (4) electric induction furnaces shall be less than 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) The total PM and PM₁₀ emissions from melting and charging for the four (4) electric induction furnaces, identified as 1, 2, 3, and 4, shall be less than 0.57 and 0.33 pound per ton of metal throughput, respectively.

Compliance with these limits combined with the emission increase from the metal charging operation due to the modification in 1991 limits shall limit the PM and PM₁₀ emissions to less than 25 and 15 tons per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to 1991 modification.

D.1.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined by use of the equation:

$$E = 4.10 P^{0.67}$$

Where:

E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour.

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
Electric induction Furnace #1	5.00	12.05
Electric induction Furnace #2	5.00	12.05
Electric induction Furnace #3	5.00	12.05
Electric induction Furnace #4	5.00	12.05
Metal Charging	20.00	30.51

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

In order to determine compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM₁₀ testing by December 2010 on one (1) of the four (4) identical electric induction furnaces and the dust collector, identified as 39-DC-4 controlling emissions from the metal charging for each furnace utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.5 Particulate Matter (PM)

- (a) In order to comply with Conditions D.1.1, D.1.2 and D.0.1, the dust collector for PM and metallic HAP control shall be in operation at all times when the electric induction furnaces are in operation.
- (b) In the event that bag failure is observed in a multi-compartment dust collector, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also included 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.1.6 HAP Calculations

Emissions of HAP in condition D.0.1 shall be determined using the following equations:

- (a) Lead Emissions from the four (4) electric induction furnaces (tons/month) = EF_{FPb} (lb/ton) x M_F (tons per month) x (1 ton / 2000 pounds)

Where:

EF_{FPb} = 0.00016992 pound lead per ton of metal throughput

M_F = total metal throughput to the four (4) electric induction furnaces (tons per month)

- (b) Lead Emissions from the charge handling operation (tons/ month) = EF_{CHPb} (lb/ton) x M_{CH} (tons per month) x (1 ton / 2000 pounds)

Where:

$EF_{CHPb} = 0.00231$ pound lead per ton of metal throughput

$M_{CH} =$ total metal throughput to the charge handling operation (tons per month)

- (c) Manganese Emissions from the four (4) electric induction furnaces (tons/ month) = EF_{FMn} (lb/ton) x M_F (tons per month) x (1 ton / 2000 pounds)

Where:

$EF_{FMn} = 0.00436$ pound manganese per ton of metal throughput

$M_F =$ total metal throughput to the four (4) electric induction furnaces (tons per month)

- (d) Manganese Emissions from the charge handling operation (tons/month) = EF_{CHMn} (lb/ton) x M_{CH} (tons per month) x (1 ton / 2000 pounds)

Where:

$EF_{CHMn} = 0.0186$ pound manganese per ton of metal throughput

$M_{CH} =$ total metal throughput to the charge handling operation (tons per month)

- (e) Total Metal HAP Emissions from the four (4) electric induction furnaces (tons/ month) = EF_{FTM} (lb/ton) x M_F (tons per month) x (1 ton / 2000 pounds)

Where:

$EF_{FTM} = 0.00495$ pound combined metal HAP per ton of metal throughput

$M_F =$ total metal throughput to the four (4) electric induction furnaces (tons per month)

- (f) Total Metal HAP Emissions from the charge handling operation (tons/ month) = EF_{CHTM} (lb/ton) x M_{CH} (tons per month) x (1 ton / 2000 pounds)

Where:

$EF_{CHTM} = 0.02273$ pound combined metal HAP per ton of metal throughput

$M_{CH} =$ total metal throughput to the charge handling operation (tons per month)

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

D.1.7 Visible Emissions Notations

-
- (a) Visible emission notations of the four (4) electric induction furnaces and the metal charge system stack exhaust (39-DC-4) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.1.8 Parametric Monitoring

The Permittee shall record the pressure drop across the dust collector in conjunction with the four (4) electric induction furnaces and metal charge system at least once per day when the four (4) electric induction furnaces and metal charge system are in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.1.9 Broken or Failed Bag Detection

- (a) For a single compartment dust collector 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.
- (b) For a single compartment dust collector 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.

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

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

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1(a), the Permittee shall maintain records of the metal throughput to the four (4) electric induction furnaces and the electric holding furnace for each month;
- (b) To document compliance with Condition D.1.7 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the four (4) electric induction furnaces and metal charging system stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.1.8 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the dust collector controlling four (4) electric induction furnaces. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);

- (d) To document compliance with condition D.1.6, the Permittee shall maintain records of the following:
 - (1) HAP emission calculations performed using the equations in condition D.1.6; and
 - (2) HAP emissions in tons per month.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a), shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) one (1) mold making operation, identified as A-Line Molding consisting of the following:
 - (1) one (1) 250 ton capacity holding silo, identified as A-Line Holding Silo, constructed in 1984, controlled by a baghouse, identified as 36-1-DC-8, exhausting through stack 36-1-DC-8, and one (1) 50 ton capacity bond silo, constructed in 1984, controlled by a bin vent;
 - (2) one (1) green sand muller, identified as A-Line Muller, constructed in 1984, with a maximum green mold sand throughput of 200 tons per hour, controlled by a baghouse, identified as 36-1-DC-8, exhausting through stack 36-1-DC-8;
 - (3) One (1) sand cooler constructed in 2008, with maximum capacity of 200 tons of sand per hour, with emissions controlled by one (1) baghouse (ID No. 36-1-DC-8) and exhausting through stack 36-1-DC-8.
 - (4) one (1) metal pouring operation, identified as A-Line Pouring, constructed in 1964, with a maximum throughput of 24 tons per hour of molten metal, and a maximum throughput of 10 tons of core sand per hour, exhausting through stack 36-E-12;
 - (5) one (1) metal cooling operation, identified as A-Line Cooling, constructed in 1964, with a maximum throughput of 24 tons per hour of molten metal, and a maximum throughput of 10 tons of core sand per hour, exhausting through exhaust fans 32-E-2 and 32-E-1; and
 - (6) one (1) mold and casting shakeout operation, identified as A-Line Shakeout, constructed in 1964, with a maximum metal casting throughput of 24 tons per hour, and a maximum throughput of 10 tons of core sand per hour, controlled by a baghouse identified as 36-1-DC-8, exhausting through stack 36-1-DC-8.

(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.2.1 PSD Minor Limit [326 IAC 2-2]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007:

- (a) The throughput of sand to the A-Line Muller and A-Line Holding Silo shall be less than 464,200 tons per twelve (12) consecutive month period, each, with compliance determined at the end of each month.
- (b) The total PM emissions from the A-Line sand cooler, A-Line Muller and A-Line Holding Silo, shall be less than 0.107 pound per ton of sand throughput, each.
- (c) The total PM10 emissions from the A-Line sand cooler, A-Line Muller and A-Line Holding silo, shall not exceed 0.064 pounds per ton of sand throughput.

Compliance with above limits, will limit PM and PM10 emissions from the A-Line Muller and A-Line Holding Silo to less than 25 and 15 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable to the 1984 modification.

D.2.2 Particulate Emission Limitation for manufacturing Processes [326 IAC 6-3-2]

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

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined 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 of the data for the process weight rate in excess sixty thousand (60,000) pounds per hour was determined 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.

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
A-Line pouring	234.00*	60.23
A-line Cooling	234.00*	60.23
A-Line Shakeout	234.00*	60.23
A-Line Muller & Sand Handling (Including A-Line Holding Silo and Sand Cooler)	200	58.51

* Include 24 tons per hour metal, 200 tons per hour mold sand and 10 tons per hour core throughput

- (b) For purposes of determining compliance with the particulate emission limits pursuant to 326 IAC 6-3-2 for the A-Line Shakeout and the A-Line Muller & Sand Handling (including the A-Line Holding Silo and Sand Cooler), all exhausting through baghouse 36-1-DC-8, the allowable particulate emission rate from baghouse 36-1-DC-8 shall be limited to 118.74 pounds per hour.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.2.4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.2.1 and D.2.2, the Permittee shall perform PM testing by July 2013 on the A-Line Pouring operation, the baghouse controlling the A-Line Shakeout operation, the A-Line Holding Silo, and the A-Line Muller, identified as 36-1-DC-8, utilizing methods as approved by the Commissioner. PM testing on A-Line pouring unit shall be completed by July 2009. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.2.5 Particulate Matter (PM)

- (a) In order to comply with Conditions D.2.1 D.2.2 and D.0.1, the baghouse for PM and metallic HAP control shall be in operation at all times when the A-line shakeout operation, A-Line Holding silo, Sand Cooler and muller are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.6 HAP Calculations

- (a) Emission of metal HAP in condition D.0.1 shall be determined using the following equations:
- (1) Lead Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{APPb} \text{ (lb/ton)} \times M_{AP} \text{ (tons per month period)}] + [EF_{ACPb} \text{ (lb/ton)} \times M_{AC} \text{ (tons per month)}] + [EF_{ASPb} \text{ (lb/ton)} \times M_{AS} \text{ (tons per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$
- Where:
- $EF_{APPb} = 0.00385$ pound lead per ton of metal throughput
- $M_{AP} =$ total metal throughput to the A-Line Pouring operation (tons per month)
- $EF_{ACPb} = 0.00539$ pound lead per ton of metal throughput
- $M_{AC} =$ total metal throughput to the A-Line Cooling operation (tons per month)
- $EF_{ASPb} = 0.000094$ pound lead per ton of metal throughput
- $M_{AS} =$ total metal throughput to the A-Line Shakeout operation (tons per month)
- (2) Manganese Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{APMn} \text{ (lb/ton)} \times M_{AP} \text{ (tons per month)}] + [EF_{ACMn} \text{ (lb/ton)} \times M_{AC} \text{ (tons per month)}] + [EF_{ASMn} \text{ (lb/ton)} \times M_{AS} \text{ (tons per consecutive month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$
- Where:
- $EF_{APMn} = 0.031$ pound manganese per ton of metal throughput
- $M_{AP} =$ total metal throughput to the A-Line Pouring operation (tons per month)
- $EF_{ACMn} = 0.0434$ pound manganese per ton of metal throughput

M_{AC} = total metal throughput to the A-Line Cooling operation (tons per month)

EF_{ASMn} = 0.00844 pound manganese per ton of metal throughput

M_{AS} = total metal throughput to the A-Line Shakeout operation (tons per month)

- (3) Total Metal HAP Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{APTM} \text{ (lb/ton)} \times M_{AP} \text{ (tons per month)}] + [EF_{ACTM} \text{ (lb/ton)} \times M_{AC} \text{ (tons per month)}] + [EF_{ASTM} \text{ (lb/ton)} \times M_{AS} \text{ (tons per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{APTM} = 0.03788 pound combined metal HAP per ton of metal throughput

M_{AP} = total metal throughput to the A-Line Pouring operation (tons per month)

EF_{ACTM} = 0.053 pound combined metal HAP per ton of metal throughput

M_{AC} = total metal throughput to the A-Line Cooling operation (tons per month)

EF_{ASTM} = 0.0112 pound combined metal HAP per ton of metal throughput

M_{AS} = total metal throughput to the A-Line Shakeout operation (tons per month)

- (b) Emissions of organic HAP in condition D.0.1(c and d) shall be determined using the following equations:

- (1) Phenol Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{APh} \text{ (lb/lb)} \times R_{CBA} \text{ (pounds per month)} \times (1 \text{ ton} / 2000 \text{ pounds})] + 0.131 \text{ ton per month phenol from the green sand molding operation for molds used in the A-Line}$

Where:

EF_{APh} = 0.00834 pound phenol per pound of Cold Box resin used

R_{CBA} = total resin usage in the Cold Box core making operation for cores used in the A-Line (pounds per month)

- (2) Benzene Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/yr) = $[EF_{AB} \text{ (lb/lb)} \times R_{CBA} \text{ (pounds per month)} \times (1 \text{ ton} / 2000 \text{ pounds})] + 0.611 \text{ ton per month benzene from the green sand molding operation for molds used in the A-Line}$

Where:

EF_{AB} = 0.00967 pound benzene per pound of Cold Box resin used

R_{CBA} = total resin usage in the Cold Box core making operation for cores used in the A-Line (pounds per month)

- (3) Total Organic HAP Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{ATO} \text{ (lb/lb)} \times R_{CBA} \text{ (pounds per month)} \times (1 \text{ ton} / 2000 \text{ pounds})] + 1.076 \text{ tons per month from the green sand molding operation for molds used in the A-Line}$

Where:

$EF_{ATO} =$ 0.01236 pound combined organic HAP per pound of Cold Box resin used

$R_{CBA} =$ total resin usage in the Cold Box core making operation for cores used in the A-Line (pounds per month)

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

D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the A-Line pouring, A-line cooling, A-Line Shakeout, A-line Holding Silo and Muller stack exhaust (36-1-DC-8, 36-E-12, 32-E-2, 32-E-1 and 36-1-DC-8) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.8 Parametric Monitoring

The Permittee shall record the pressure drop across the the A-Line Shakeout operation and the A-Line Holding Silo and Muller baghouse used in conjunction with the A-Line Shakeout operation and the A-Line Holding Silo and Muller at least once per day when the A-Line Shakeout operation and the A-Line Holding Silo and Muller are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.2.9 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (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.

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

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

D.2.10 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1(a), the Permittee shall maintain records of the sand throughput to the A-Line Muller and A-Line Holding Silo for each month;
 - (b) To document compliance with Condition D.2.7 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the A-Line pouring, A-Line cooling, A-Line Holding Silo and Muller, and the A-Line Shakeout operation stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
 - (c) To document compliance with Condition D.2.8 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the A-Line Holding Silo and Muller and the A-Line Shakeout operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
 - (d) To document compliance with Condition D.2.6(a), the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to each of the A-Line Pouring, Cooling, and Shakeout operations for each month;
 - (2) Metallic HAP emission calculations performed using the equations in condition D.2.6(a); and
 - (3) Metallic HAP emissions in tons per month.
 - (e) To document compliance with Condition D.2.6(b), the Permittee shall maintain records of the following:
 - (1) pounds of resin used in the Cold Box core making operation for cores used in the A-Line for each month;
 - (2) Organic HAP emission calculations performed using the equations in condition D.2.6(b); and
 - (3) Organic HAP emissions in tons per month.
 - (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.
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D.2.11 Reporting Requirements

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (f) one (1) mold making operation, identified as B-Line Molding consisting of the following:
 - (1) one (1) 75 ton capacity holding silo, identified as B-Line Holding Silo, constructed in 1987, controlled by a baghouse, identified as 36-1-DC-7, exhausting through stack 36-1-DC-7, and one (1) 50 ton capacity bond silo, constructed in 1987, controlled by a bin vent;
 - (2) one (1) green sand muller, identified as B-Line Muller, constructed in 1987, with a maximum green mold sand throughput of 100 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, exhausting through stack 36-1-DC-7;
 - (3) one (1) metal pouring operation, identified as B-Line Pouring, constructed in 1986, with a maximum throughput of 9 tons per hour of molten metal, and a maximum throughput of 4 tons of core sand per hour, exhausting through stack 36-E-5;
 - (4) one (1) metal cooling operation, identified as B-Line Cooling, constructed in 1986, with a maximum throughput of 9 tons per hour of molten metal, and a maximum throughput of 4 tons of core sand per hour, exhausting through stack 36-E-6; and
 - (5) one (1) mold shakeout operation, identified as B-Line Shakeout, constructed in 1987, with a maximum metal casting throughput of 9 tons per hour, and a maximum throughput of 4 tons of core sand per hour, controlled by a baghouse, identified as 36-1-DC-7, exhausting through stack 36-1-DC-7.

(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.3.1 PSD Minor Limit [326 IAC 2-2] [326 IAC 8-1-6]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007 and Operating Permit T091-6295-00020 issued on December 30, 2002:

- (a) The throughput of metal to each of the B-Line Pouring, B-Line Cooling, and B-Line Shakeout operations, constructed in a twelve month period from 1986 to 1987, shall be less than 31,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of sand to the B-Line Muller and the B-Line Holding Silo shall be less than 130,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) The total PM emissions from the B-Line Pouring, B-Line Cooling, and B-Line Shakeout operation shall be less than 0.37 pound per ton of metal throughput.
- (d) The total PM emissions from the B-Line Muller and the B-Line Holding Silo operation shall be less than 0.29 pound per ton of sand throughput.

Compliance with the metal throughput limit, the sand throughput limit, and combined with the emission reductions from the removal of an existing floor molding operation in 1986, shall limit the PM and PM₁₀ emissions from the B-Line Pouring, B-Line Cooling, B-Line Shakeout, B-Line Muller and B-Line Holding Silo operations to less than 25 and 15 tons per year, respectively and render 326 IAC 2-2 (PSD) not applicable to the 1986 and 1987 modification.

- (e) The total CO emissions from the B-Line Pouring, B-Line Cooling and B-Line Shakeout operations shall not exceed 6.0 pounds per ton of metal throughput.

Compliance with the metal throughput limit shall limit the CO emissions from the B-Line Pouring, Cooling and Shakeout operations constructed in the twelve month period from 1986 to 1987 to less than 100 tons per year and render 326 IAC 2-2 (PSD) not applicable to the 1986 and 1987 modification.

- (f) Pursuant to 326 IAC 8-1-6, the VOC emissions from the B-Line Pouring and B-Line shakeout operation shall not exceed 0.14 and 1.2 pounds of VOC per ton of metal charged, respectively.

Compliance with the above limits will limit the potential VOC emissions from the B-Line Shakeout and B-Line pouring to less than 40 tons/yr and render 326 IAC 2-2 not applicable to the 1986 and 1987 modification.

D.3.2 Particulate Emission Limitaions for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined 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 of the data for the process weight rate in excess sixty thousand (60,000) pounds per hour was determined 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.

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
B-Line pouring	113.00*	52.51
B-line Cooling	113.00*	52.51
B-Line Shakeout	113.00*	52.51
B-Line Muller & Sand Handing (Including A-Line Holding Silo)	100	51.28

* Include 9 tons per hour metal, 100 tons per hour mold sand and 4 tons per hour core throughput

- (b) For purposes of demonstrating compliance with the particulate emission limits pursuant to 326 IAC 6-3-2 for the B-Line Shakeout and the B-Line Muller & Sand Handling (including the B-Line Holding Silo), and the Cold Box sand mixer, the Cold Box sand hopper and elevator, the No Bake sand hopper, the Warm Box mixers, and the Warm Box sand hopper listed in section D.7, all of which are controlled by the baghouse identified as 36-1-DC-7, the allowable particulate emission rate from the baghouse, identified as 36-1-DC-7, shall be limited to 142.77 pounds per hour.

D.3.3 Volatile Organic Compounds (VOC) [326IAC 8-1-6]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007:

- (b) The throughput of metal to each of the B-Line Pouring and B-Line Shakeout operations shall be less than 31,500 tons per twelve (12) consecutive month period.
- (a) The VOC emissions from the B-Line Pouring operation shall be less than 0.14 pounds of VOC per ton of metal charged;
- (a) The VOC emissions from the B-Line Shakeout operation shall be less than 1.2 pounds of VOC per ton of metal charged;

Compliance with the metal throughput limit and the VOC emission limits shall limit VOC emissions from the B-Line Pouring and B-Line shakeout to less than 25 tons per year and render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable to this emission unit.

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.3.5 Particulate Matter (PM)

- (a) In order to comply with Conditions D.3.1 and D.3.2, the baghouse for PM and control shall be in operation at all times when the B-Line Shakeout and the B-Line Holding Silo and Muller are in operation.
- (b) In order to comply with Condition D.0.1, the baghouse for PM and metallic HAP control shall be in operation at all times when the B-Line Shakeout is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.6 HAP Calculations

- (a) Metal HAP Emissions for condition D.0.1 shall be determined using the following equations:
- (1) Lead Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{BPPb} \text{ (lb/ton)} \times M_{BP} \text{ (tons per month)}] + [EF_{BCPb} \text{ (lb/ton)} \times M_{BC} \text{ (tons per month)}] + [EF_{BSPb} \text{ (lb/ton)} \times M_{BS} \text{ (tons per month period)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{BPPb} = 0.01617$ pound lead per ton of metal throughput

$M_{BP} =$ total metal throughput to the B-Line Pouring operation (tons per month)

$EF_{BCPb} = 0.00539$ pound lead per ton of metal throughput

$M_{BC} =$ total metal throughput to the B-Line Cooling operation (tons per month)

$EF_{BSPb} = 0.00256$ pound lead per ton of metal throughput

$M_{BS} =$ total metal throughput to the B-Line Shakeout operation (tons per month)

- (2) Manganese Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{BPMn} \text{ (lb/ton)} \times M_{BP} \text{ (tons per month)}] + [EF_{BCMn} \text{ (lb/ton)} \times M_{BC} \text{ (tons per month)}] + [EF_{BSMn} \text{ (lb/ton)} \times M_{BS} \text{ (tons per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{BPMn} = 0.1302$ pound manganese per ton of metal throughput

$M_{BP} =$ total metal throughput to the B-Line Pouring operation (tons per month)

$EF_{BCMn} = 0.0434$ pound manganese per ton of metal throughput

$M_{BC} =$ total metal throughput to the B-Line Cooling operation (tons per month)

$EF_{BSMn} = 0.0206$ pound manganese per ton of metal throughput

$M_{BS} =$ total metal throughput to the B-Line Shakeout operation (tons per month)

- (3) Total Metal HAP Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{BPTM} \text{ (lb/ton)} \times M_{BP} \text{ (tons per month)}] + [EF_{BCTM} \text{ (lb/ton)} \times M_{BC} \text{ (tons per month)}] + [EF_{BSTM} \text{ (lb/ton)} \times M_{BS} \text{ (tons per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{BPTM} = 0.1591$ pound combined metal HAP per ton of metal throughput

$M_{BP} =$ total metal throughput to the B-Line Pouring operation (tons per month)

$EF_{BCTM} = 0.053$ pound combined metal HAP per ton of metal throughput

$M_{BC} =$ total metal throughput to the B-Line Cooling operation (tons per month)

$EF_{BSTM} = 0.0252$ pound combined metal HAP per ton of metal throughput

$M_{BS} =$ total metal throughput to the B-Line Shakeout operation (tons per month)

- (b) Organic HAP Emissions for condition D.0.1 shall be demonstrated using the following equations:

- (1) Phenol Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{BPh} \text{ (lb/lb)} \times R_{CBB} \text{ (pounds per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

+ 0.043 ton per month from the green sand molding operation for molds used in the B-Line

Where:

$EF_{BPh} = 0.0039$ pound phenol per pound of Cold Box resin used

$R_{CBB} =$ total resin usage in the Cold Box core making operation for cores used in the B-Line (pounds per month)

- (2) Benzene Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{BB} \text{ (lb/lb)} \times R_{CBB} \text{ (pounds per month)} \times (1 \text{ ton} / 2000 \text{ pounds})]$ + 0.199 ton per month from the green sand molding operation for molds used in the B-Line

Where:

$EF_{BB} = 0.00535$ pound benzene per pound of Cold Box resin used

$R_{CBB} =$ total resin usage in the Cold Box core making operation for cores used in the B-Line (pounds per month)

- (3) Total Organic HAP Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/ month) = $[EF_{BTO} \text{ (lb/lb)} \times R_{CBB} \text{ (pounds per month)} \times (1 \text{ ton} / 2000 \text{ pounds})]$ + 0.35 ton per month from the green sand molding operation for molds used in the B-Line

Where:

$EF_{BTO} = 0.01236$ pound combined organic HAP per pound of Cold Box resin used

$R_{CBB} =$ total resin usage in the Cold Box core making operation for cores used in the B-Line (pounds per month)

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

D.3.7 Visible Emissions Notations

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- (a) Visible emission notations of the B-Line pouring, B-Line cooling, B-Line Holding Silo and Muller and the B-Line Shakeout operation stack exhaust (36-1-DC-7, 36-E-5, 36-E-6) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.3.8 Parametric Monitoring

The Permittee shall record the pressure drop across the B-Line Shakeout operation and the B-line Holding and Muller baghouse used in conjunction with the B-Line Shakeout operation and the B-line Holding and Muller baghouse at least once per day when the billet shot blasting operations are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.3.9 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (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.

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

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

D.3.10 Record Keeping Requirements

- (a) To document compliance with Conditions D.3.1(a) and D.3.1(b), the Permittee shall maintain records of the metal throughput to each of the B-Line Pouring, B-Line Cooling, and B-Line Shakeout operations and the sand throughput to the B-Line Muller for each month;
- (b) To document compliance with Condition D.3.7 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the B-Line pouring, B-Line Holding Silo and Muller, and the B-Line Shakeout operation stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.3.8 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouses controlling the B-Line Holding Silo and Muller, and the B-Line Shakeout operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (d) To document compliance with Condition D.3.6(a), the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to each of the B-Line Pouring, Cooling, and Shakeout operations for each month;

- (2) Metallic HAP emission calculations performed using the equations in condition D.3.6(a); and
 - (3) Metallic HAP emissions in tons per month.
- (e) To document compliance with Condition D.3.6(b), the Permittee shall maintain records of the following:
- (1) pounds of resin used in the Cold Box core making operation for cores used in the B-Line for each month;
 - (2) Organic HAP emission calculations performed using the equations in condition D.3.6(b); and
 - (3) Organic HAP emissions in tons per month.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.11 Reporting Requirements

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (g) one (1) mold making operation, identified as Floor Molding consisting of the following:
 - (1) one (1) High Speed Continuous Sand Mixer, identified as Mixer and associated High Speed Continuous Sand Mixer hopper, constructed in 2001, with a maximum mold sand throughput of 42 tons per hour, with the hopper controlled by a baghouse, identified as 30-DC-6, exhausting through stack 30-DC-6;
 - (2) one (1) metal pouring operation, identified as Floor Pouring, constructed in 1922, with a maximum throughput of 6 tons per hour of molten metal, a maximum throughput of 3 tons of core sand per hour, and a maximum throughput of 26 tons of mold sand per hour, exhausting inside the building;
 - (3) one (1) metal cooling operation, identified as Floor Cooling, constructed in 1922, with a maximum throughput of 6 tons per hour of molten metal, with a maximum throughput of 3 tons of core sand per hour, and a maximum throughput of 26 tons of mold sand per hour, exhausting inside the building;
 - (4) one (1) mold shakeout operation, identified as Floor Shakeout, constructed in 1922, with a maximum metal casting throughput of 6 tons per hour, with a maximum throughput of 3 tons of core sand per hour, and a maximum throughput of 26 tons of mold sand per hour. The Floor Shakeout emission is uncontrolled and exhausting inside the building;
- (h) one (1) casting knockout station, identified as Floor Knockout Station, constructed in 1965, with a maximum throughput of 15 tons of iron castings per hour, controlled by a baghouse identified as 8-DC-2, and exhausting inside the building; and
- (i) one (1) Wheelabrator shot blast machine, identified as Shot Blast, constructed in 1990, with a maximum throughput of 31 tons of iron castings per hour, controlled by a baghouse, identified as 36-DC-8, and exhausting inside the building.

(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.4.1 PSD Minor Limit [326 IAC 2-2]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007 and revised by Operating Permit T091-24543-00020:

- (a) The total PM and PM₁₀ emissions from the Wheelabrator shot blast machine, constructed in 1990, shall be less than 0.7 and 0.42 pound per ton of metal throughput, respectively.
- (b) The throughput of metal to the Wheelabrator shot blast machine shall be less than 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the emission limits in paragraph (a) and the metal throughput limit in paragraph (b) above, shall limit the total PM and PM₁₀ emissions to less than 25 and 15 tons per year,

respectively and render 326 IAC 2-2 (PSD) not applicable to the 1990 modification.

- (c) The total PM and PM₁₀ emissions from the High Speed Continuous Sand Mixer, combined with the Raw sand storage silo and Spent sand storage silo in Section D.6 constructed in 2001, shall be less than 0.01 and 0.01 pound per ton of sand throughput, respectively.
- (d) The throughput of sand to the Speed Continuous Sand Mixer and its associated sand hopper, Raw sand storage silo and Spent sand storage silo, shall be less than 42,574 tons of sand per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the emission limits in paragraph (c) and the sand throughput limit in paragraph (d) above, combined with the PM and PM10 emissions from the New scrap handling crusher, New scrap handling rotary reclaimers, metal conveyor, Raw sand storage silo and Spent sand storage silo in Section D.6 shall limit the PM and PM10 emissions to less than 25 and 15 tons per year, respectively and render 326 IAC 2-2 (PSD) not applicable to the 2001 modification.

- (e) The resin usage for the High Speed Continuous Sand Mixer (ID Mixer) shall be less than 471,789 pounds of resin per 12 consecutive month period, with compliance determined at the end of each month.
- (f) The VOC emissions from the High Speed Continuous Sand Mixer (ID Mixer) shall be less than 0.05 pound per pound of resin.
- (g) The catalyst usage for the High Speed Continuous Sand Mixer shall be less than 26,211 pounds of VOC catalyst per 12 consecutive month period, with compliance determined at the end of each month.

Compliance with the resin and catalyst usage limits and VOC emission limit in paragraphs (e), (f) and (g) above shall limit the VOC emissions to less than 40 tons per year and render 326 IAC 2-2 (PSD) not applicable to the 2001 modification.

D.4.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

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

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined 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 of the data for the process weight rate in excess sixty thousand (60,000) pounds per hour was determined 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.

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
Floor pouring	35.00*	41.32
Floor Cooling	35.00*	41.32
Floor Shakeout	35.00*	41.32
Knockout Station	15.00	25.16
High Speed Continuous and Floor sand handling	42.00	42.29
Wheelabrator shot blast	31.00	40.24

* Include 6 tons per hour metal, 26 tons per hour mold sand and 3 tons per hour core throughput

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

Pursuant to SPM 091-20949-00020 issued on April 19, 2007:

- (a) The resin usage for the High Speed Continuous Sand Mixer (ID Mixer) shall be less than 471,789 pounds of resin per 12 consecutive month period, with compliance determined at the end of each month.
- (b) The VOC emissions from the High Speed Continuous Sand Mixer (ID Mixer) shall be less than 0.05 pound per pound of resin.
- (c) The catalyst usage for the High Speed Continuous Sand Mixer shall be less than 26,211 pounds of VOC catalyst per 12 consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits, shall limit the VOC emissions from the High Speed Continuous Sand Mixer to less than 25 tons per year and render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable to the source.

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

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

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

In order to determine compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform PM and PM₁₀ testing before October 2013 on each of the baghouses controlling the High Speed Continuous Sand Mixer hopper, the Knockout Station and the Wheelabrator shot blast machine, identified as 30-DC-6, 8-DC-2 and 36-DC-8, respectively, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.4.6 Particulate Matter (PM)

- (a) In order to comply with Conditions D.4.1 and D.4.2, the baghouse for PM control shall be in operation at all times when the High Speed Continuous Sand mixer hopper, the floor knockout Station and the Wheelabrator shot blast machine are in operation.
- (b) In order to comply with Condition D.0.1, the baghouse for PM control and metallic HAP shall be in operation at all times when the the floor knockout Station and the wheelabrator shot blast machine are in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also included 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.4.7 HAP Calculations

- (a) Metal HAP Emissions for condition D.0.1 shall be determined using the following equations:

- (1) Lead Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/ month) = $[EF_{FPPb} \text{ (lb/ton)} \times M_{FP} \text{ (tons per month)}] + [EF_{FCPb} \text{ (lb/ton)} \times M_{FC} \text{ (tons per month)}] + [EF_{FSPb} \text{ (lb/ton)} \times M_{FS} \text{ (tons per month)}] + [EF_{FKPb} \text{ (lb/ton)} \times M_{FK} \text{ (tons per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{FPPb} = 0.01617$ pound lead per ton of metal throughput

$M_{FP} =$ total metal throughput to the Floor Pouring operation (tons per month)

$EF_{FCPb} = 0.00539$ pound lead per ton of metal throughput

$M_{FC} =$ total metal throughput to the Floor Cooling operation (tons per month)

$EF_{FSPb} = 0.01232$ pound lead per ton of metal throughput

$M_{FS} =$ total metal throughput to the Floor Shakeout operation (tons per month)

$EF_{FKPb} = 0.0256$ pound lead per ton of metal throughput

$EF_{FK} =$ total metal throughput to the Floor Knockout operation (tons per month)

- (2) Manganese Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/ month) = $[EF_{FPMn} \text{ (lb/ton)} \times M_{FP} \text{ (tons per month)}] + [EF_{FCMn} \text{ (lb/ton)} \times M_{FC} \text{ (tons per month)}] + [EF_{FSMn} \text{ (lb/ton)} \times M_{FS} \text{ (tons per month)}] + [EF_{FKMn} \text{ (lb/ton)} \times M_{FK} \text{ (tons per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{FPMn} = 0.1302$ pound manganese per ton of metal throughput

$M_{FP} =$ total metal throughput to the Floor Pouring operation (tons per month)

$EF_{FCMn} = 0.0434$ pound manganese per ton of metal throughput

M_{FC} = total metal throughput to the Floor Cooling operation (tons per month)

EF_{FSMn} = 0.0992 pound manganese per ton of metal throughput

M_{FS} = total metal throughput to the Floor Shakeout operation (tons per month)

EF_{FKMn} = 0.0206 pound manganese per ton of metal throughput

EF_{FK} = total metal throughput to the Floor Knockout operation (tons per month)

- (3) Total Metal HAP Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/ month) = $[EF_{FPTM}$ (lb/ton) \times M_{FP} (tons per month)] + $[EF_{FCTM}$ (lb/ton) \times M_{FC} (tons per month)] + $[EF_{FSTM}$ (lb/ton) \times M_{FS} (tons per month)] + $[EF_{FKTM}$ (lb/ton) \times M_{FK} (tons per month)] \times (1 ton / 2000 pounds)

Where:

EF_{FPTM} = 0.1591 pound combined metal HAP per ton of metal throughput

M_{FP} = total metal throughput to the Floor Pouring operation (tons per month)

EF_{FCTM} = 0.053 pound combined metal HAP per ton of metal throughput

M_{FC} = total metal throughput to the Floor Cooling operation (tons per month)

EF_{FSTM} = 0.12122 pound combined metal HAP per ton of metal throughput

M_{FS} = total metal throughput to the Floor Shakeout operation (tons per month)

EF_{FKTM} = 0.0252 pound combined metal HAP per ton of metal throughput

EF_{FK} = total metal throughput to the Floor Knockout operation (tons per month)

- (4) Lead Emissions from the Wheelabrator shot blast machine (tons/ month) = EF_{WPb} (lb/ton) \times M_W (tons per month) \times (1 ton / 2000 pounds)

Where:

EF_{WPb} = 0.00137 pound lead per ton of metal throughput

M_W = total metal throughput to the Wheelabrator shot blast machine (tons per month)

- (5) Manganese Emissions from the Wheelabrator shot blast machine (tons/ month) = EF_{WMn} (lb/ton) \times M_W (tons per month) \times (1 ton / 2000 pounds)

Where:

EF_{WMn} = 0.0111 pound manganese per ton of metal throughput

M_W = total metal throughput to the Wheelabrator shot blast machine (tons per month)

- (6) Total Metal HAP Emissions from the Wheelabrator shot blast machine (tons/ month) = EF_{WTM} (lb/ton) \times M_W (tons per month) \times (1 ton / 2000 pounds)

Where:

$EF_{WTM} = 0.0135$ pound combined metal HAP per ton of metal throughput

$M_W =$ total metal throughput to the Wheelabrator shot blast machine (tons per month)

(b) Organic HAP Emissions for condition D.0.1(d) and (e) shall be determined using the following equations:

(1) Phenol Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month) = EF_{FPh} (lb/lb) x R_{NB} (pounds per month) x (1 ton / 2000 pounds)

Where:

$EF_{FPh} = 0.0039$ pound phenol per pound of No Bake resin used

$R_{NB} =$ total resin usage in the No Bake core making operation and High Speed Continuous Sand Mixer (pounds per month)

(2) Benzene Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month) = EF_{FB} (lb/lb) x R_{NB} (pounds per month) x (1 ton / 2000 pounds)

Where:

$EF_{FB} = 0.00535$ pound benzene per pound of No Bake resin used

$R_{NB} =$ total resin usage in the No Bake core making operation and High Speed Continuous Sand Mixer (pounds per month)

(3) Total Organic HAP Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month) = EF_{FTO} (lb/lb) x R_{NB} (pounds per month) x (1 ton / 2000 pounds)

Where:

$EF_{FTO} = 0.01236$ pound combined organic HAP per pound of No Bake resin used

$R_{NB} =$ total resin usage in the No Bake core making operation and High Speed Continuous Sand Mixer (pounds per month)

(4) Xylene Emissions from the High Speed Continuous Sand Mixer (tons/month) = [EF_{MR1X} (lb/lb) x R_{MNB1} (pounds per month)] + [EF_{MCX} (lb/lb) x C_{MNB} (pounds per month)] x (1 ton / 2000 pounds)

Where:

$EF_{MR1X} = 0.001$ pound xylene per pound of No Bake Part I resin used

$R_{MNB1} =$ total No Bake Part I resin usage in the High Speed Continuous Sand Mixer (pounds per month)

$EF_{MCX} = 0.0489$ pound xylene per pound of No Bake catalyst used (based on MSDS for catalyst)

$C_{MNB} =$ total No Bake catalyst usage in the High Speed Continuous Sand Mixer (pounds per month)

(5) Total HAP Emissions from the High Speed Continuous Sand Mixer (tons/yr) =
[EF_{MR1TO} (lb/lb) x R_{MNB1} (pounds per month)] + [EF_{MR2TO} (lb/lb) x R_{MNB2} (pounds
per month)] + [EF_{MCTO} (lb/lb) x C_{MNB} (pounds per month)] x (1 ton / 2000 pounds)

Where:

EF_{MR1TO} = 0.0032 pound total organic HAPs per pound of No Bake Part I resin
used

R_{MNB1} = total No Bake Part I resin usage in the High Speed Continuous Sand
Mixer (pounds per month)

EF_{MR2TO} = 0.002 pound total organic HAPs per pound of No Bake Part II resin
used

R_{MNB2} = total No Bake Part II resin usage in the High Speed Continuous Sand
Mixer (pounds per month)

EF_{MCTO} = 0.0698 pound total organic HAPs per pound of No Bake catalyst used
(based on MSDS for catalyst)

C_{MNB} = total No Bake catalyst usage in the High Speed Continuous Sand
Mixer (pounds per month)

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

D.4.8 Visible Emissions Notations

- (a) Visible emission notations of the High Speed Continuous Sand Mixer hopper stack exhaust (30-DC-6) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.4.9 Parametric Monitoring

The Permittee shall record the pressure drop across the High Speed Continuous Sand mixer hopper, the Knockout station and the Wheelabrator shot blast machine baghouse used in conjunction with the billet shot blasting operations at least once per day when the High Speed Continuous Sand mixer hopper, the Knockout station and the Wheelabrator shot blast machine are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range

is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.4.10 Broken or Failed Bag Detection

- (a) For a single compartment baghouse 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.
- (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.

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

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

D.4.11 Record Keeping Requirements

- (a) To document compliance with Condition D.4.1(d), the Permittee shall maintain records of the sand throughput to the High Speed Continuous Sand Mixer for each month.
- (b) To document compliance with Conditions D.4.1(e), D.4.1(g), D.4.3(a), and D.4.3(c), the Permittee shall maintain records of the resin and catalyst usage for the High Speed Continuous Sand Mixer for each month.
- (c) To document compliance with Condition D.4.1(f) and D.4.3(b), the Permittee shall maintain records of the VOC content of the binders used for the High Speed Continuous Sand Mixer each month.
- (d) To document compliance with Condition D.4.1(b), the Permittee shall maintain records of the metal throughput to the Wheelabrator shot blast machine for each month.
- (e) To document compliance with Condition D.4.8 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the, High Speed Continuous Sand Mixer stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (f) To document compliance with Condition D.4.9 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouses controlling the High Speed Continuous Sand Mixer hopper, the Knockout Station, and the Wheelabrator shot blast machine operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (g) To document compliance with Condition D.4.7(a), the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to each of the Floor Pouring, Floor Cooling, Floor Shakeout, and Floor Knockout operations for each month;

- (2) tons of metal throughput to the Wheelabrator shot blast machine for each month;
 - (3) Metallic HAP emission calculations performed using the equations in condition D.4.7(a); and
 - (4) Metallic HAP emissions in tons per month.
- (h) To document compliance with Condition D.4.7(b), the Permittee shall maintain records of the following:
- (1) Pounds of Part I and Part II resin used in the No Bake core making operation and the High Speed Continuous Sand Mixer for each month;
 - (2) Organic HAP emission calculations performed using the equations in condition D.4.7(b); and
 - (3) Organic HAP emissions in tons per month.
- (i) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.4.1(b), D.4.1(d), D.4.1(e), D.4.1(g), D.4.3(a) and D.4.3(c), shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (j) one (1) Chill Iron shot blast machine, identified as Chill Iron Shot Blast, constructed in 1972, with a maximum throughput of 3,500 pounds of castings per hour, controlled by a baghouse, identified as 8-DC-2, and exhausting inside the building; and

(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.5.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter emission rate from the Chill Iron blast machine shall be less than 5.96 pounds per hour when operating at a process weight rate of 3,500 pounds per hour.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined 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(13)]

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.5.3 Particulate Matter (PM)

- (a) In order to comply with Conditions D.5.1 and D.0.1, the baghouse for PM and metallic HAP control shall be in operation at all times when the Chill Iron shot blast machine process is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.5.4 HAP Calculations

Compliance with the HAP limits in condition D.0.1 shall be demonstrated using the following equations:

- (a) Lead Emissions from the Chill Iron shot blast machine (tons/month) = EF_{ChPb} (lb/ton) x M_{Ch} (tons per month) x (1 ton / 2000 pounds)

Where:

$$EF_{\text{ChPb}} = 0.0013 \text{ pound lead per ton of metal throughput}$$

$$M_{\text{Ch}} = \text{total metal throughput to the Chill Iron shot blast machine (tons per month)}$$

- (b) Manganese Emissions from the Chill Iron shot blast machine (tons/yr) = EF_{ChMn} (lb/ton) x M_{Ch} (tons per month) x (1 ton / 2000 pounds)

Where:

$$EF_{\text{ChMn}} = 0.0105 \text{ pound manganese per ton of metal throughput}$$

$$M_{\text{Ch}} = \text{total metal throughput to the Chill Iron shot blast machine (tons per month)}$$

- (c) Total Metal HAP Emissions from the Chill Iron shot blast machine (tons/month) = EF_{ChTM} (lb/ton) x M_{Ch} (tons per month) x (1 ton / 2000 pounds)

Where:

$$EF_{\text{ChTM}} = 0.0128 \text{ pound combined metal HAP per ton of metal throughput}$$

$$M_{\text{Ch}} = \text{total metal throughput to the Chill Iron shot blast machine (tons per month)}$$

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

D.5.5 Parametric Monitoring

The Permittee shall record the pressure drop across the Chill Iron shot blast machine baghouse used in conjunction with the Chill Iron shot blast machine operations at least once per day when the Chill iron shot blast machine operations are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.5.6 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.
- (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.

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

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

D.5.7 Record Keeping Requirement

- (a) To document compliance with Condition D.5.5 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop the across the baghouse controlling the Chill iron shot blast stack exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (b) To document compliance with Condition D.5.4, the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to the Chill Iron shot blast machine for each month;
 - (2) Metallic HAP emission calculations performed using the equations in condition D.5.4; and
 - (3) Metallic HAP emissions in tons per month.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (l) One (1) indoor scrap handling operation, constructed in 2001, consisting of the following:
 - (1) one (1) metal scrap crusher, with a maximum scrap metal throughput of 15 tons per hour, controlled by a baghouse identified as 39-DC-5, and exhausting through a stack 39-DC-5;
 - (2) one (1) rotary reclaimer, with maximum scrap metal and sand throughputs of 15 and 10 tons per hour, respectively, controlled by a baghouse identified as 39-DC-5, and exhausting through stack 39-DC-5;
 - (3) one (1) sand and metal conveyor, with maximum scrap metal and sand throughputs of 15 and 10 tons per hour, respectively, controlled by a baghouse, identified as 39-DC-5, and exhausting through stack 39-DC-5; and
 - (4) one (1) enclosed conveyor system transporting spent sand to spent sand storage silo, with a maximum sand storage capacity of 100 tons, and a maximum sand throughput of 10 tons per hour, controlled by a baghouse, identified as 39-DC-5, and exhausting through stack 39-DC-5.
- (m) one (1) pneumatically conveyed raw sand storage silo, constructed in 2001 for the High Speed Continuous Sand Mixer, with a maximum sand storage capacity of 75 tons, and a maximum sand throughput of 10 tons per hour, controlled by a baghouse identified as 39-DC-5, and exhausting through stack 39-DC-5; and

(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.6.1 PSD Minor Limit [326 IAC 2-2]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007 and revised by Operating Permit T091-24543-00020:

- (a) The total PM and PM₁₀ emissions from the indoor scrap handling operation (New scrap handling crusher, New scrap handling rotary reclaimer, and metal conveyor) shall be less than 0.86 and 0.54 pound per ton of metal throughput, respectively.
- (b) The total PM and PM₁₀ emissions from the Raw sand storage silo and Spent sand storage silo combined with the PM and PM₁₀ emissions from High Speed Continuous Sand Mixer, in Section D.4 constructed in 2001, shall be less than 0.01 and 0.01 pound per ton of sand throughput, respectively.
- (c) The throughput of metal to the indoor scrap handling operation (New scrap handling crusher, New scrap handling rotary reclaimer, and metal conveyor), shall be less than 50,000 tons of metal per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (d) The throughput of sand from the Raw sand storage silo, Spent sand storage silo and High Speed Continuous Sand Mixer, shall be less than 42,574 tons of sand per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the emission limits in paragraph (a) and (b), the metal throughput limit in paragraph (c), the sand throughput limit in paragraph (d) combined with the PM and PM₁₀ emissions from the High Speed Continuous Sand Mixer in section D.4 above, shall limit the total PM and PM₁₀ emissions to less than 25 and 15 tons per year, respectively and render 326 IAC 2-2 (PSD) not applicable to the 2001 modification.

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

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined 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 of the data for the process weight rate in excess sixty thousand (60,000) pounds per hour was determined 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.

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
New scrap handling crusher	15.00	25.16
New scrap handling rotary reclaimer	25.00	35.43
Spent Sand storage silo	10.00	19.18
Sand and metal conveyor	25.00	35.43
Raw Sand storage Silo	10.00	19.18

- (b) For purposes of demonstrating compliance with the particulate emission limits for the indoor scrap handling operation and the raw sand storage silo, all of which are controlled by the baghouse that exhausts through stack No. 39-DC-5, the allowable particulate emission rate from stack No. 39-DC-5 shall be limited to 134.38 pounds per hour.

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.6.4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- (a) In order to determine compliance with Conditions D.6.1 and D.6.2, the Permittee shall perform PM and PM₁₀ testing by July 2013 on the baghouse that exhausts through stack No. 39-DC-5 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination. Testing shall be conducted in accordance with Section C- Performance Testing.

D.6.5 Particulate Matter (PM)

- (a) In order to comply with Conditions D.6.1 and D.6.2, the baghouse for PM control shall be in operation at all times when the New scrap handling crusher, New scrap handling rotary reclaimer, Raw sand storage silo, Spent sand storage silo and Sand conveyor are in operation.
- (b) In order to comply with Condition D.0.1, the baghouse for PM and metallic HAP control shall be in operation at all times when the New scrap handling crusher operation is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.6.6 HAP Calculations

Emissions of HAP in condition D.0.1 shall be determined using the following equations:

- (a) Lead Emissions from the scrap handling rotary reclaimer (tons/month) = $EF_{RRPb} \text{ (lb/ton)} \times M_{RR} \text{ (tons per month)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{RRPb} = 0.00014$ pound lead per ton of metal throughput

$M_{RR} =$ total metal throughput to the scrap handling rotary reclaimer (tons per month)

- (b) Manganese Emissions from the scrap handling rotary reclaimer (tons/month) = $EF_{RRMn} \text{ (lb/ton)} \times M_{RR} \text{ (tons per month)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{RRMn} = 0.0011$ pound manganese per ton of metal throughput

$M_{RR} =$ total metal throughput to the scrap handling rotary reclaimer (tons per month)

- (c) Total HAP Emissions from the scrap handling rotary reclaimer (tons/month) = $EF_{RRTM} \text{ (lb/ton)} \times M_{RR} \text{ (tons per month)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{RRTM} = 0.0013$ pound combined metal HAP per ton of metal throughput

$M_{RR} =$ total metal throughput to the scrap handling rotary reclaimer (tons per month)

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

D.6.7 Visible Emissions Notations

- (a) Visible emission notations of the New scrap handling crusher, New scrap handling rotary reclaimer, Raw sand storage silo, Spent sand storage silo and Sand conveyor stack exhaust (39-DC-5) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.6.8 Parametric Monitoring

The Permittee shall record the pressure drop across the New scrap handling crusher, New scrap handling rotary reclaimer, Raw sand storage silo, Spent sand storage silo and Sand conveyor baghouse used in conjunction with the New scrap handling crusher, New scrap handling rotary reclaimer, Raw sand storage silo, Spent sand storage silo and Sand conveyor at least once per day when the New scrap handling crusher, New scrap handling rotary reclaimer, Raw sand storage silo, Spent sand storage silo and Sand conveyor are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.6.9 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (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.

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

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

D.6.10 Record Keeping Requirement

- (a) To document compliance with Condition D.6.1(c), the Permittee shall maintain records of the metal throughput to the New scrap handling crusher, New scrap handling rotary reclaimer, and metal conveyor for each month.
- (b) To document compliance with Condition D.6.1(d), the Permittee shall maintain records of the sand throughput to the Raw sand storage silo and Spent sand storage silo for each month.
- (c) To document compliance with Condition D.6.7 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the indoor scrap handling operation and the raw sand storage silo stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (d) To document compliance with Condition D.6.8 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the indoor scrap handling operation and the raw sand storage silo. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (e) To document compliance with Condition D.6.6, the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to the scrap handling rotary reclaimer for each month;
 - (2) Metallic HAP emission calculations performed using the equations in condition D.6.6; and
 - (3) Metallic HAP emissions in tons per month.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.11 Reporting Requirements

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

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (n) two (2) 200 ton capacity core and mold sand silos identified as Silo #1 and Silo #2, both constructed in 1950, each with a maximum sand throughput of 16.8 tons per hour, both controlled by a baghouse, identified as 37-1-DC-3), exhausting through stack 37-1-DC-3;
- (o) one (1) Cold Box core making operation consisting of the following:
 - (1) one (1) Cold Box sand mixer, constructed in 1975, with a maximum sand throughput of 5.8 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;
 - (2) one (1) Cold Box core machine, constructed in 1975, with a maximum throughput of 5.8 tons per hour of sand, with VOC and HAP emissions controlled by a natural gas-fired afterburner, identified as Afterburner J, with a maximum capacity of 1.4 MMBtu per hour, and exhausting through stack 37-1-E-2;
 - (3) one (1) 10 ton capacity Cold Box line sand hopper and elevator, constructed in 1975, with a maximum sand throughput of 5.8 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;
- (p) one (1) No Bake core making operation consisting of the following:
 - (1) one (1) enclosed No Bake sand mixer, constructed in 1979, consisting of the No Bake Large Core Mixer and the No Bake Small Core Mixer, with a maximum sand throughput of 6.0 tons per hour;
 - (2) one (1) No Bake core machine, constructed in 1979, with a maximum throughput of 6.0 tons per hour of sand, and exhausting inside the building;
 - (3) one (1) 10 ton capacity No Bake line sand hopper, constructed in 1979, with a maximum sand throughput of 6.0 tons per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;
- (q) one (1) Warm Box core making operation consisting of the following:
 - (1) two (2) Warm Box mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;
 - (2) three (3) Warm Box core machines identified as Warm Box Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, and exhausting inside the building;
 - (3) one (1) 10 ton capacity Warm Box line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7.

Emissions Unit Description:

Weil McLain intends to convert Warm Box Core Making Process to a Phenolic Urethane cold box Making Process

- (q) One (1) Cold Box making operation, identified as CB-2, consisting of the following:
- (1) two (2) mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7 and exhausting through one (1) stack, identified as 36-1-DC-7;
 - (2) three (3) Cold Box core machines identified as Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, with an acid scrubber to control the catalyst emissions and exhausting inside the building; and
 - (3) one (1) 10 ton capacity line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by one (1) baghouse, identified as 36-1-DC-7, and exhausting through one (1) stack, identified as 36-1-DC-7.
- (r) one (1) enclosed 10 ton capacity core and mold sand hopper, elevator, and conveyor, constructed in 1975, with a maximum sand throughput of 16.8 tons 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.7.1 PSD Minor Limit [326 IAC 2-2]

Pursuant to SPM 091-20949-00020 issued on April 19, 2007 and revised by Operating Permit T091-24543-00020:

- (a) The total PM emissions from the No bake sand mixer and sand handling, No bake core/Mold making and No Bake line sand hopper constructed in 1979, shall be less than 1.9 pounds per hour, each. This PM limit and associated capture efficiency requirement in combination with the fugitive PM emissions from the No Bake line sand hopper shall limit emissions from the No Bake line sand hopper to less than 25 tons per year.

Compliance with above limit in paragraph (a), will limit PM emissions from the No bake sand mixer and No Bake line sand hopper to less than 25 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable to the 1979 modification.

- (b) The resin usage for the No bake core machine shall be less than 255,867 pounds of resin per 12 consecutive month period, with compliance determined at the end of each month. The catalyst usage for the No Bake core machine shall be less than 63,967 pounds of VOC catalyst per 12 consecutive month period, with compliance determined at the end of each month.

- (c) The VOC emissions from resin usage in the No Bake core machine shall be less than 0.05 pound per pound of resin.

Compliance with the resin and catalyst usage limits in paragraph (b) and the VOC emission limit in paragraph (c) from the No Bake core machine will limit the total VOC emissions to less than 40 tons per year and render the 326 IAC 2-2 (PSD) not applicable to 1979 modification

D.7.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined by use of the equation:

$$E = 4.10 P^{0.67}$$

Where:

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
Cold Box Sand Mixer	5.80	13.31
Cold Box line sand hopper	5.80	13.3
No Bake Sand Mixer	6.0	13.6
No Bake Line Handling	6.00	13.62
Warm Box Mixer 1	3.5	9.49
Warm Box Mixer 2	1.5	5.38
Sand Hopper	5.00	12.05

- (b) For purposes of demonstrating compliance with the particulate emission limits pursuant to 326 IAC 6-3-2 for the Cold box core making and sand handling, the No Bake core making, the Sand Hopper, and the B-Line Shakeout and the B-Line Muller & Sand Handling (including the B-Line Holding Silo) listed in section D.3, all of which are controlled by the baghouse identified as 36-1-DC-7, the allowable particulate emission rate from the baghouse identified as 36-1-DC-7 shall be limited to 142.77 pounds per hour.

D.7.3 PSD Minor Limits [326 IAC 2-2]

The VOC emissions from the Phenolic urethane Core making operation, identified as core machines #1, #2 and #3 shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 (core machines #1, #2 and #3) shall not exceed 32 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = [(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{Ef2})] / 2000 \text{ lbs/ton}$$

Where:

Ef1 = 1.0 pounds per ton of core sand;

Ef2 = 1.0 pounds per ton of catalyst

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the phenolic urethane core making operation to less than 40 tons per year and render 326 IAC 2-2 (PSD) not applicable to the CB-2 isocure cold box core making process.

D.7.4 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The VOC emissions from the CB-2 core machine #3 shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 core machine #3 shall not exceed 20.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = [(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{Ef2})] / 2000 \text{ lbs/ton}$$

Where:

Ef1 = 1.0 pounds per ton of core sand;

Ef2 = 1.0 pounds per ton of catalyst

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the CB-2 cold box core machine #3 to less than 25 tons per year and render 326 IAC 8-1-6 (New Facilities, General Reduction requirements) not applicable to the CB-2 cold box core machine #3.

D.7.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.7.6 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- (a) Within 180 days after issuance of Permit T091-24543-00020, In order to demonstrate compliance with Conditions D.7.1 and D.7.2, the Permittee shall perform PM testing on the No bake sand mixer and No Bake line sand hopper, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) Within one hundred and eighty (180) days after the startup of the core machines, identified as #1, #2 and #3, in order to determine compliance with Condition D.7.3 and D.7.4, the Permittee shall perform VOC control efficiency testing on the scrubber controlling the CB-2 cold box core machines #1, #2 and #3, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.7.7 Control Equipment

- (a) In order to comply with Conditions D.7.1(a) and D.7.2, the baghouse for PM control shall be in operation at all times when the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the sand hopper, and the Sand Mixers, at all times that the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the line sand hopper, and the Sand Mixers are in operation.
- (b) In order to comply with Condition D.7.1a, the baghouse for PM control shall be in operation at all times that the No Bake line sand hopper is in operation and shall maintain a minimum capture efficiency of 75% in order to comply with this limit.
- (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) In order to comply with Condition D.7.3, the scrubber for DMIPA control shall be in operation and control emissions from the cold box core machines, identified as #1, #2 and #3 at all times that any of the core machines is in operation.

D.7.8 HAP Calculations

Emissions of HAP limits in condition D.0.1 shall be determined using the following equations:

- (a) Xylene Emissions from the No Bake core making operation (tons/month) = $[EF_{NBR1X} \text{ (lb/lb)} \times R_{CNB1} \text{ (pounds per month)}] + [EF_{NBCX} \text{ (lb/lb)} \times C_{CNB} \text{ (pounds per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{NBR1X} = 0.001 pound xylene per pound of No Bake Part I resin used

R_{CNB1} = total No Bake Part I resin usage in the No Bake core making operation (pounds per month)

EF_{NBCX} = 0.0489 pound xylene per pound of No Bake catalyst used (based on MSDS for catalyst)

C_{CNB} = total No Bake catalyst usage in the No Bake core making operation (pounds per month)

- (b) Total Organic HAP Emissions from the No Bake core making operation (tons/ month) = $[EF_{NBR1TO} \text{ (lb/lb)} \times R_{CNB1} \text{ (pounds per month)}] + [EF_{NBR2TO} \text{ (lb/lb)} \times R_{CNB2} \text{ (pounds per month)}] + [EF_{NBCTO} \text{ (lb/lb)} \times C_{CNB} \text{ (pounds per month)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{NBR1TO} = 0.0032 pound total organic HAPs per pound of No Bake Part I resin used

R_{CNB1} = total No Bake Part I resin usage in the No Bake core making operation (pounds per month)

EF_{NBR2TO} = 0.002 pound total organic HAPs per pound of No Bake Part II resin used

R_{CNB2} = total No Bake Part II resin usage in the No Bake core making operation (pounds per month)

$EF_{NBCTO} = 0.0698$ pound total organic HAPs per pound of No Bake catalyst used (based on MSDS for catalyst)

$C_{CNB} =$ total No Bake catalyst usage in the No Bake core making operation (pounds per twelve (12) consecutive month period)

- (c) Ethylene Glycol Emissions from the Warm Box core making operation (tons/month) = EF_{WBEG} (lb/lb) x C_{WB} (pounds per month) x (1 ton / 2000 pounds)

Where:

$EF_{WBEG} = 0.08$ pound ethylene glycol per pound of Warm Box catalyst used (based on MSDS for catalyst)

$C_{WB} =$ total Warm Box catalyst usage in the Warm Box core making operation (pounds per month)

- (d) Phenol Emissions from the Warm Box core making operation (tons/month) = E_{WBPh} (lb/lb) x C_{WB} (pounds per month) x (1 ton / 2000 pounds)

Where:

$E_{WBPh} = 0.06$ pound phenol per pound of Warm Box catalyst used (based on MSDS for catalyst)

$C_{WB} =$ total Warm Box catalyst usage in the Warm Box core making operation (pounds per month)

- (e) Total HAP Emissions from the Warm Box core making operation (tons/month) = [EF_{WBRTO} (lb/lb) x R_{WB} (pounds per month)] + [EF_{WBCTO} (lb/lb) x C_{WB} (pounds per month)] x (1 ton / 2000 pounds)

Where:

$EF_{WBRTO} = 0.00075$ pound total organic HAPs per pound of Warm Box resin used

$R_{WB} =$ total Warm Box resin usage in the Warm Box core making operation (pounds per month)

$EF_{WBCTO} = 0.14$ pound total organic HAPs per pound of Warm Box catalyst used (based on MSDS for catalyst)

$C_{WB} =$ total Warm Box catalyst usage in the Warm Box core making operation (pounds per month)

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

D.7.9 Visible Emissions Notations

- (a) Visible emission notations of the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the CB-2 Mixers and hopper, and the Sand Mixers stack exhaust (stack 36-1-DC-7) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part

of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.7.10 Parametric Monitoring

The Permittee shall record the pressure drop across the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the Cold Box line sand hopper, and the Sand Mixers baghouse used in conjunction with the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the sand hopper, and the Sand Mixers at least once per day when the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the sand hopper, and the Warm Box Sand Mixers are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.7.11 Scrubber Parametric Monitoring

- (a) The Permittee shall record the pressure drop, flow rate, and pH of the Scrubber controlling the CB-2 cold box core machines #1, #2 and #3 at least once per day when the CB-2 cold box core machines #1, #2 and #3 are in operation.
 - (1) When for any one reading, the pressure drop across Scrubber is below a minimum specified by the manufacturer or a minimum pressure drop established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.
 - (2) When for any one reading, the flow rate across Scrubber is below a minimum specified by the manufacturer or a minimum flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.
 - (3) When for any one reading, the pH across Scrubber is below a minimum of 4.5 or a minimum pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.

A pressure drop, flow rate, or pH reading that is below the above mentioned minimums is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.7.12 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.
- (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.

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

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

D.7.13 Record Keeping Requirement

- (a) To document compliance with Condition D.7.1(b), the Permittee shall maintain records of the resin and catalyst usage for the No Bake core machine for each month.
- (b) To document compliance with Condition D.7.1(c), The Permittee shall maintain records of the resin and catalyst usage for the No Bake core machine for each month.
- (c) To document compliance with Condition D.7.8, the Permittee shall maintain records of the following:
 - (1) pounds of combined catalyst and combined resin usage for the Warm Box core machines for each month;
 - (2) Organic HAP emission calculations performed using the equations in condition D.7.8; and
 - (3) Organic HAP emissions in tons per month.

The requirements in paragraphs (c)(1) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.

- (d) To document compliance with Condition D.7.9 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the for the baghouse controlling the Cold Box Line Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the CB-2 Mixers and hopper, and the core and mold sand hopper stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (e) To document compliance with Condition D.7.10 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the Cold Box Line Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the Warm Box Line Mixers and hopper, and the core and mold sand hopper. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

- (f) To document compliance with Condition D.7.11 – Scrubber Parametric Monitoring, the Permittee shall maintain the daily records of the pH, pressure drop and flow rate reading across the scrubber. The Permittee shall include in its daily record when the pH, pressure drop and flow rate reading are not taken and the reason for the lack of pH, pressure drop and flow rate readings, (e.g. the process did not operate that day).
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.14 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1(b), D.7.3, and D.7.4, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (k) one (1) paint spray booth, identified as Spray Painting, constructed in 1982, using a high volume low pressure (HVLP) coating application system, using a maximum of 9.8 pounds of coating per hour to coat metal base boards and a maximum of 10 gallons per year of paint thinner, with dry filters for particulate matter overspray control, and exhausting through stack 5-E-1.

(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.8.1 Particulate Emission Limitation, Work Practices, and Control Technologies [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) paint spray booth, identified as Spray Painting shall be controlled by dry particulate filters and the Permittee shall operate the control devices in accordance with manufacturer's specifications.

D.8.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

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

D.8.3 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint spray booths while the booth is in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C-Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. when there is a noticeable change in overspray emissions, or when evidence of overspray emission is observed, the Permittee shall take reasonable response steps in accordance with section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.8.4 Record Keeping Requirement

- (a) To document compliance with Condition D.8.3, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspection.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Specifically Regulated Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; [326-IAC-6-3-2]
- (b) Grinding and machining operations 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 4,000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations [326 IAC 6-3].
- (c) Other categories with emissions below insignificant thresholds:
 - (1) one (1) machining operation, identified as Machining, modified in 1987, consisting:
 - (2) thirty (30) machines performing tapping, drilling, and reaming on the metal castings, with a maximum metal casting throughput of 20 tons per hour;
 - (3) Six (6) reamer machines controlled by a baghouse, identified as 8-DC-1;
 - (4) three (3) grinding machines, controlled by a baghouse; and
 - (5) eight (8) CNC machines used for grinding, cutting and reaming, controlled by coolant.

Potential PM and PM₁₀ emissions before control are less than twenty-five (25) pounds per day.

(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.9.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate emissions from the brazing equipment, cutting torches, soldering equipment, and welding equipment shall be limited by 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

- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emission rate from the grinding and machining operations with a process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

D.9.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emissions from the one (1) machine operation, thirty (30) machines performing tapping, drilling and reaming on the metal castings, six (6) reamer machines and three (3) grinding machines and eight (8) CNC machines used for grinding, cutting and reaming shall be limited by 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

Compliance Determination Requirements

D.9.3 Particulate Matter (PM)

The Baghouse for particulate control shall be in operation and control emissions from the six (6) reamer machines and three (3) grinding machines at all times that the six (6) reamer machines and three (3) grinding machines are in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020

This form consists of 2 pages

Page 1 of 2

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

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020
 Facility: four (4) electric induction furnaces, the electric holding furnace and the charge handling system
 Parameter: PM/PM10 emissions and lead, manganese and combined HAP emissions
 Limit: The throughput of metal to each of the following facilities shall be less than 50,000 per twelve (12) consecutive month period, with compliance determined at the end of each month

QUARTER:

YEAR:

Month	Metal Throughput This Month (tons)			Metal Throughput Previous 11 Months (tons)			Column 1 + Column 2 12 Month Total (tons)		
	Electric Induction Furnaces	Electric Holding Furnace	Charge Handling	Electric Induction Furnaces	Electric Holding Furnace	Charge Handling	Electric Induction Furnaces	Electric Holding Furnace	Charge Handling
Month 1									
Month 2									
Month 3									

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: A-Line Muller
Parameter: PM Emissions
Limit: The throughput of sand to A-line Muller and A-Line Holding silo shall be less than 464,200 tons per twelve (12) consecutive month period

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020
 Facility: B-Line Pouring, B-Line Cooling and B-Line Shakeout operations
 Parameter: PM Emissions
 Limit: The throughput of metal to each of the B-Line pouring, B-Line Cooling and B-line Shakeout operations shall not exceed 31,500 tons per twelve (12) consecutive month period.

QUARTER :

YEAR:

Month	Metal Throughput This Month (tons)			Metal Throughput Previous 11 Months (tons)			Column 1 + Column 2 12 Month Total (tons)		
	B-Line Pouring	B-Line Cooling	B-Line Shakeout	B-Line Pouring	B-Line Cooling	B-Line Shakeout	B-Line Pouring	B-Line Cooling	B-Line Shakeout
Month 1									
Month 2									
Month 3									

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: B-Line Muller
Parameter: PM Emissions
Limit: The throughput of sand to the B-Line Muller and B-line Holding Silo shall be less than 130,000 tons per twelve (12) consecutive month period.

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand throughput (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: High Speed Continuous Sand mixer and hopper
Parameter: PM, PM10 and VOC Emissions
Limit: The throughput of sand to the High Speed Continuous Sand mixer shall be less than 42,574 tons of sand per twelve (12) consecutive month period.

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020
 Facility: High Speed Continuous Sand Mixer
 Parameter: VOC Emissions
 Limit: (a) The resin usage for the High speed Continuous Sand Mixer shall be less than 471,789 pounds of resin per twelve (12) consecutive month period
 (b) Catalyst usage for the High Speed Continuous Sand Mixer shall not exceed 26,211 pounds of VOC catalyst per twelve (12) consecutive month period.

QUARTER :

YEAR:

Month	Column 1		Column 2		Column 1 + Column 2	
	Resin Usage This Month (pounds)	Catalyst Usage This Month (pounds)	Resin Usage Previous 11 Months (pounds)	Catalyst Usage Previous 11 Months (pounds)	12 Month Total Resin Usage (pounds)	12 Month Total Catalyst Usage (pounds)
Month 1						
Month 2						
Month 3						

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Wheelabrator Shot blast machine
Parameter: PM and PM₁₀ Emissions
Limit: The throughput of metal to the Wheelabrator shot blast machine shall be less than 50,000 tons per twelve (12) consecutive month period

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Throughput This Month (tons)	Metal Throughput Previous 11 Months (tons)	12 Month Total Metal Throughput (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Raw sand storage silo for the High Speed Continuous Sand Mixer
Parameter: PM and PM10 emissions
Limit: The throughput of sand from the raw sand silo shall be less than 42,574 tons per twelve (12) consecutive month period.

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020
 Facility: No Bake Core Machine
 Parameter: VOC Emissions
 Limit: The resin usage for the No bake core machine shall be less than 255,867 pounds of resin per twelve (12) consecutive month period. Catalyst usage for No bake core machine shall not exceed 63,967 pounds of VOC catalyst per twelve (12) consecutive month period

QUARTER:

YEAR:

Month	Column 1		Column 2		Column 1 + Column 2	
	Resin Usage This Month (pounds)	Catalyst Usage This Month (pounds)	Resin Usage Previous 11 Months (pounds)	Catalyst Usage Previous 11 Months (pounds)	12 Month Total Resin Usage (pounds)	12 Month Total Catalyst Usage (pounds)
Month 1						
Month 2						
Month 3						

No deviation occurred in this quarter.

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: CB-2 Core machines (#1, #2 and #3)
Parameter: VOC emissions
Limit: less than 32.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month period.

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (tons)	Previous 11 Months (tons)	12 Month Total (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020
 Facility: CB-2 Core machine, identified as core machine #3
 Parameter: VOC emissions
 Limit: less than 20.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month period. .

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (tons)	Previous 11 Months (tons)	12 Month Total (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Lead Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Lead Emissions (tons)	Previous 11 Months Lead Emissions (tons)	12 Month Total Lead Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Manganese Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Manganese Emissions (tons)	Previous 11 Months manganese Emissions (tons)	12 Month Total Manganese Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Benzene Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Benzene Emissions (tons)	Previous 11 Months Benzene Emissions (tons)	12 Month Total Benzene Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Phenol Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Phenol Emissions (tons)	Previous 11 Months Phenol Emissions (tons)	12 Month Total Phenol Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Xylene Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Xylene Emissions (tons)	Previous 11 Months Xylene Emissions (tons)	12 Month Total Xylene Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Total HAPs Limit
Limit: Less than 25 tons per year for total HAPs per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Total Emissions (tons)	Previous 11 Months Total Emissions (tons)	12 Month Total Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

**Addendum to the Technical Support Document (TSD)
for a Part 70 Operating Permit**

Source Description and Location

Source Name:	Weil - McLain, A United Dominion Company
Source Location:	500 Blaine Street, Michigan City, IN 46360
County:	LaPorte
SIC Code:	3321
Operation Permit No.:	T 091-24543-00020
Operation Permit Issuance Date:	November 24, 2008
Significant Permit Modification No.:	091-27013-00020
Permit Reviewer:	Josiah Balogun

Public Notice Information

On November 13, 2008, the Office of Air Quality (OAQ) had a notice published in The news Dispatch Newspaper in Michigan City, Indiana, stating that Weil - McLain, A United Dominion Company had applied for a Part 70 Operating Permit. Weil - McLain, A United Dominion Company was issued a Part 70 Operating Permit on November 24, 2008 for a gray iron foundry. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflects the permit that was on public notice. Changes that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result, ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Other Changes

Upon further review IDEM, OAQ has made the following changes to the Title V permit T091-27013-00020. (deleted language appears as ~~strikeout~~ and the new language **bolded**):

Change 1 In order to clarify the HAPs limit a new Section D.0 has been created. This section essentially, is the summary of HAPs limits from all other Sections.

SECTION D.0 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:
Entire Source

(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.0.1 Hazardous Air Pollutants (HAPs) Minor Limits

The Permittee shall comply with the following:

- (a) Lead emissions from the entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Manganese emissions from the entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Benzene emissions from entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) Phenol emissions from entire source shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (e) The combined HAPs limit from the entire source shall be less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits will limit the single and combined HAPs to less than 10 and 25 tons per year, respectively, and will make this source an area source of HAPs.

Compliance Determination

D.0.2 Hazardous Air Pollutants (HAPs) Compliance Determination

HAP Emission limits in condition D.0.1 shall be determined using the following equations:

Lead emissions = Lead emission calculated in Conditions [D.1.6(a) + D.1.6(b) + D.2.6(a)(1) + D.3.6(a)(1) + D.4.7(a)(1) + D.5.4(a) + D.6.6(a)]

Manganese emissions = Manganese emission calculated in Conditions [D.1.6(c) + D.1.6(d) + D.2.6(a)(2) + D.3.6(a)(2) + D.4.7(a)(2) + D.5.4(b) + D.6.6(b)]

Benzene emissions = Benzene emission calculated in Conditions [D.1.6 + D.2.6(b)(2) + D.3.6(b)(2) + D.4.7(b)(2) + D.5.4 + D.6.6]

Phenol emissions = Phenol emission calculated in Conditions [D.2.6(b)(1) + D.3.6(b)(1) + D.4.7(b)(1) + D.5.4 + D.6.6 + D.7.8(d)]

Xylene emissions = Xylene emission calculated in Condition [D.4.7(b)(4) + D.7.8(a)]

Total HAPs emissions = HAPs emission calculated in Conditions [D.1.6(e) + D.1.6(f) + D.2.6(a)(3) + D.2.6(b)(3) + D.3.6(a)(3) + D.3.6(b)(3) + D.4.7(a)(3) + D.4.7(b)(3)(5) + D.5.4(c) + D.6.6(c) + D.7.8(b) + D.7.8(e)]

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

D.0.3 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.0.1, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Change 2: Condition D.1.3 - HAP Minor Limit has been deleted from the permit because individual limits are not required due to inclusion of more streamlined condition D.0.1. Subsequent conditions have been renumbered.

~~D.1.3 HAP Minor Limit~~

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007:~~

- ~~(a) The emissions of lead from the four (4) electric induction furnaces, identified as 1, 2, 3, and 4 shall be less 2.32 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(b) The emissions of manganese from the four (4) electric induction furnaces, identified as 1, 2, 3, and 4 shall less than 0.66 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(c) The emission of any combination of HAPs from the four (4) electric induction furnaces, identified as 1, 2, 3, and 4 shall be less 2.43 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(d) The emissions of lead from the metal charging system shall be less than 0.10 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(e) The emissions of manganese from the metal charging system shall be less than 0.47 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(f) The emissions of any combination of HAPs from the metal charging system shall be less than 0.57 ton per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~—A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (tons/yr)
Four (4) Electric Induction Furnaces	Lead	2.32
	Manganese	0.66
	Total Metal HAPs	2.43
Metal charging	Lead	0.10
	Manganese	0.47
	Total Metal HAPs	0.57

~~Compliance with the emission limits in paragraphs (a), (b), (d), and (e) above in combination with the other lead and manganese limits included in this permit shall limit source wide single HAP emissions to less than 10 tons per year. Compliance with the limits in paragraphs (c) and (f) above in combination with the other combined HAP limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

Change 3: Conditions D.1.5(b) and (c) (now D.1.4) have been deleted from the permit.

D.1.5 4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- ~~(a) *****~~
- ~~(b) In order to determine compliance with Condition D.1.3(a), (b)(d) and (e), the Permittee shall perform lead and manganese testing by October 2013 on one (1) of the four (4) electric induction furnaces utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.~~
- ~~(c) Within nine (9) months after issuance of this Permit T091-24543-00020, in order to determine compliance with Condition D.1.3(c) and (f), the Permittee shall perform total metal HAP testing on one (1) of the four (4) electric induction furnaces utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.~~

Change 4: Since Condition D.1.3 has been deleted from the permit, hence, the need to delete all references to Condition D.1.3 in the permit.

D.1.6 5 Particulate Matter (PM)

- (a) In order to comply with Conditions D.1.1, D.1.2 **and D.0.1** ~~and D.1.3~~, the dust collector for PM and metallic HAP control shall be in operation at all times when the electric induction furnaces are in operation.

Change 5: Condition D.1.7 (now D.1.6) has been updated in the permit.

D.1.7 6 HAP Calculations

Emissions of HAP in condition **D.0.1** ~~D.1.3~~ shall be determined using the following equations:

- (a) Lead Emissions from the four (4) electric induction furnaces (tons/month) = $EF_{FPb} \text{ (lb/ton)} \times M_F \text{ (tons per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{FPb} = 0.00016992 \text{ pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$

$M_F = \text{total metal throughput to the four (4) electric induction furnaces (tons per twelve (12) consecutive month period)}$

- (b) Lead Emissions from the charge handling operation (tons/yr) = $EF_{CHPb} \text{ (lb/ton)} \times M_{CH} \text{ (tons per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{CHPb} = 0.00231 \text{ pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$

$M_{CH} = \text{total metal throughput to the charge handling operation (tons per twelve (12) consecutive month period)}$

- (c) Manganese Emissions from the four (4) electric induction furnaces (tons/month) = $EF_{FMn} \text{ (lb/ton)} \times M_F \text{ (tons per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})$

pounds)

Where:

$EF_{FMn} = 0.00436$ pound manganese per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

$M_F =$ total metal throughput to the four (4) electric induction furnaces (tons per ~~twelve (12) consecutive~~ month period)

- (d) Manganese Emissions from the charge handling operation (tons/month) = EF_{CHMn} (lb/ton) x M_{CH} (tons per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)

Where:

$EF_{CHMn} = 0.0186$ pound manganese per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

$M_{CH} =$ total metal throughput to the charge handling operation (tons per ~~twelve (12) consecutive~~ month period)

- (e) Total Metal HAP Emissions from the four (4) electric induction furnaces (tons/month) = EF_{FTM} (lb/ton) x M_F (tons per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)

Where:

$EF_{FTM} = 0.00495$ pound combined metal HAP per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

$M_F =$ total metal throughput to the four (4) electric induction furnaces (tons per ~~twelve (12) consecutive~~ month period)

- (f) Total Metal HAP Emissions from the charge handling operation (tons/month) = EF_{CHTM} (lb/ton) x M_{CH} (tons per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)

Where:

$EF_{CHTM} = 0.02273$ pound combined metal HAP per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

$M_{CH} =$ total metal throughput to the charge handling operation (tons per ~~twelve (12) consecutive~~ month period)

- ~~(g) Upon IDEM approval of lead and manganese compliance stack test results on one (1) of the four (4) electric induction furnaces, the following shall apply:~~

~~(1) The lead and manganese emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{FPb} and EF_{FMn} .~~

~~(2) The total metal HAP emission factor in pound per ton that shall be used for the variable EF_{FTM} shall be the sum of the lead emission factor obtained from the stack test, the manganese emission factor obtained from the stack test and the remaining non-lead and non-manganese metal HAP emission factors used to calculate emissions.~~

Condition D.1.12. Subsequent sub-conditions have been renumbered.

D.1.104 Record Keeping Requirements

- (b) To document compliance with Condition D.1.8 **7 - Visible Emission Notation**, the Permittee shall maintain daily records of visible emission notations of the four (4) electric induction furnaces and metal charging system stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
 - (c) To document compliance with Condition D.1.9 **8 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop across the dust collector controlling four (4) electric induction furnaces. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
 - (d) To document compliance with condition **D.1.6 D.1-3**, the Permittee shall maintain records of the following:
 - (1) ~~HAP stack test results for one (1) of the four (4) electric induction furnaces;~~
 - (21) HAP emission calculations performed using the equations in condition D.1.67;
and
 - (32) HAP emissions in tons per year month.
-

D.1.11 2- Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a) and ~~D.1.3, including supporting calculations and data used for determining compliance with the HAP emission limits in condition D.1.3,~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 7: Conditions D.2.3 and D.2.4 have been deleted from the permit. Subsequent conditions have been renumbered.

D.2.3 Metallic HAP Minor Limit

Pursuant to SPM 091-20949-00020 issued on April 19, 2007:

- (a) ~~The total emissions of lead from the A-Line Pouring, Cooling, and Shakeout operations shall not exceed 1.10 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
 - (b) ~~The total emissions of manganese from the A-Line Pouring, Cooling, and Shakeout operations shall not exceed 3.04 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
 - (c) ~~The total emissions of any combination of metal HAPs from the A-Line Pouring, Cooling, and Shakeout operations shall not exceed 3.71 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~
- ~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (tons/yr)
A-Line Pouring, Cooling and Shakeout	Lead	1.10
	Manganese	3.04
	Total Metal HAPs	3.71

Compliance with the emission limits in paragraphs (a) and (b) above in combination with the other lead and manganese limits in the permit shall limit source wide lead emissions and source wide manganese emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above in combination with the other combined HAP limits shall limit any combination of HAPs to less than 25 tons per year.

D.2.4 Organic HAP Minor Limit

Pursuant to SPM 091-20949-00020 issued on April 19, 2007:

- (a) ~~The emissions of phenol from the A-Line Pouring, Cooling and Shakeout operations and the B-Line Pouring, Cooling and Shakeout operations (listed in section D.3) combined together shall be less than 1.85 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (b) ~~The emissions of benzene from the A-Line Pouring, Cooling and Shakeout operations and the B-Line Pouring, Cooling and Shakeout operations (listed in section D.3) combined together shall be less than 2.41 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (c) ~~The emissions of any combination of organic HAPs from the A-Line Pouring, Cooling and Shakeout operations and the B-Line Pouring, Cooling and Shakeout operations (listed in section D.3) combined together shall be less than 2.41 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

A summary of these limits is included in the following table:

Emission Unit	Pollutant	Emission Limit (tons/yr)
A-Line and B-Line Pouring, Cooling and Shakeout	Phenol	1.85
	Benzene	2.41
	Total Organic HAPs	2.41

Compliance with the emission limits in paragraphs (a) and (b) above in combination with the other phenol and benzene limits included in this permit shall limit source wide phenol emissions and source wide benzene emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above in combination with the other combined HAP limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.

Change 8: The Testing Requirement has been revised and Condition D.2.6(c) has been deleted from the permit.

D.2.64 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.2.1 and D.2.2, the Permittee shall perform PM testing by July ~~2013~~ ~~2008~~ on the A-Line Pouring operation, the baghouse controlling the A-Line Shakeout operation, the A-Line Holding Silo, and the A-Line Muller, identified as 36-1-DC-8, utilizing methods as approved by the Commissioner, **PM testing on the A-Line pouring unit shall be completed by July 2009**. This test shall be

repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

~~(b) In order to determine compliance with Conditions D.2.3(a) and (b) and D.2.4(a) and (b), the Permittee shall perform lead and manganese testing and phenol and benzene testing by October 2013, respectively on the A-Line Pouring, A-Line Cooling, and A-Line Shakeout operations utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

~~(c) Within nine (9) months after issuance of Permit T091-24543-00020, in order to determine compliance with Conditions D.2.3(c) and D.2.4(c), the Permittee shall perform total organic HAP testing on the A-Line Pouring, A-Line Cooling, and A-Line Shakeout operations and total metal HAP testing on the A-Line Pouring, A-Line Cooling, and A-Line Shakeout operations, respectively, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.~~

Change 9: Conditions D.2.7 (now D.2.5) has been updated.

D.2.7 5 Particulate Matter (PM)

(a) In order to comply with Conditions D.2.1, D.2.2 and **D.0.1 D.2.3**, the baghouse for PM and metallic **HAP** control shall be in operation at all times when the A-line shakeout operation, A-Line Holding silo, Sand Cooler and miller are in operation.

Change 10: Conditions D.2.8(c) and (d) (now D.2.6) have been deleted from the permit.

D.2.8 6 HAP Calculations

(a) Emission of metal HAP in condition **D.0.1 D.2.3** shall be determined using the following equations:

(1) Lead Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{APPb} \text{ (lb/ton)} \times M_{AP} \text{ (tons per twelve (12) consecutive month period)}] + [EF_{ACPb} \text{ (lb/ton)} \times M_{AC} \text{ (tons per twelve (12) consecutive month period)}] + [EF_{ASpb} \text{ (lb/ton)} \times M_{AS} \text{ (tons per twelve (12) consecutive month period)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{APPb} = 0.00385 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{AP} = total metal throughput to the A-Line Pouring operation (tons per twelve (12) consecutive month period)

EF_{ACPb} = 0.00539 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{AC} = total metal throughput to the A-Line Cooling operation (tons per twelve (12) consecutive month period)

EF_{ASpb} = 0.000094 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{AS} = total metal throughput to the A-Line Shakeout operation (tons per

~~twelve (12) consecutive month period)~~

- (2) Manganese Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{APMn} \text{ (lb/ton)} \times M_{AP} \text{ (tons per } \del{twelve (12)} \text{ consecutive month period})}] + [EF_{ACMn} \text{ (lb/ton)} \times M_{AC} \text{ (tons per } \del{twelve (12)} \text{ consecutive month period})}] + [EF_{ASMn} \text{ (lb/ton)} \times M_{AS} \text{ (tons per } \del{twelve (12)} \text{ consecutive month period})}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{APMn} = 0.031 pound manganese per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{AP} = total metal throughput to the A-Line Pouring operation (tons per ~~twelve (12) consecutive month period~~)

EF_{ACMn} = 0.0434 pound manganese per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{AC} = total metal throughput to the A-Line Cooling operation (tons per ~~twelve (12) consecutive month period~~)

EF_{ASMn} = 0.00844 pound manganese per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{AS} = total metal throughput to the A-Line Shakeout operation (tons per ~~twelve (12) consecutive month period~~)

- (3) Total Metal HAP Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{APTM} \text{ (lb/ton)} \times M_{AP} \text{ (tons per } \del{twelve (12)} \text{ consecutive month period})}] + [EF_{ACTM} \text{ (lb/ton)} \times M_{AC} \text{ (tons per } \del{twelve (12)} \text{ consecutive month period})}] + [EF_{ASTM} \text{ (lb/ton)} \times M_{AS} \text{ (tons per } \del{twelve (12)} \text{ consecutive month period})}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{APTM} = 0.03788 pound combined metal HAP per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{AP} = total metal throughput to the A-Line Pouring operation ~~(tons per twelve (12) consecutive month period)~~

EF_{ACTM} = 0.053 pound combined metal HAP per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{AC} = total metal throughput to the A-Line Cooling operation (tons per ~~twelve (12) consecutive month period~~)

EF_{ASTM} = 0.0112 pound combined metal HAP per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{AS} = total metal throughput to the A-Line Shakeout operation (tons per ~~twelve (12) consecutive month period~~)

- (b) Emissions of organic HAP in condition ~~D-2.4~~ **D.0.1(c and d)** shall be determined using the following equations:

- (1) Phenol Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{APh} \text{ (lb/lb)} \times R_{CBA} \text{ (pounds per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})] + 0.131 \text{ ton per year month}$ phenol from the green sand molding operation for molds used in the A-Line

Where:

$EF_{APh} = 0.00834$ pound phenol per pound of Cold Box resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

$R_{CBA} =$ total resin usage in the Cold Box core making operation for cores used in the A-Line (pounds per ~~twelve (12) consecutive month period~~)

- (2) Benzene Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{AB} \text{ (lb/lb)} \times R_{CBA} \text{ (pounds per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})] + 0.611 \text{ ton per month year}$ benzene from the green sand molding operation for molds used in the A-Line

Where:

$EF_{AB} = 0.00967$ pound benzene per pound of Cold Box resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

$R_{CBA} =$ total resin usage in the Cold Box core making operation for cores used in the A-Line (pounds per ~~twelve (12) consecutive month period~~)

- (3) Total Organic HAP Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/month) = $[EF_{ATO} \text{ (lb/lb)} \times R_{CBA} \text{ (pounds per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})] + 1.076 \text{ tons per month year}$ from the green sand molding operation for molds used in the A-Line

Where:

$EF_{ATO} = 0.01236$ pound combined organic HAP per pound of Cold Box resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

$R_{CBA} =$ total resin usage in the Cold Box core making operation for cores used in the A-Line (pounds per ~~twelve (12) consecutive month period~~)

- ~~(c) Upon IDEM approval of total metallic HAP compliance stack test results on the A-Line Pouring, Cooling and Shakeout operations, the lead, manganese, and total metallic HAP emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{APPbT} , EF_{ACPBt} , EF_{ASPBt} , EF_{APMnt} , EF_{ACMnt} , EF_{ASMT} , EF_{APMT} , EF_{ACTMT} , and EF_{ASTMT} .~~
- ~~(d) Upon IDEM approval of total organic HAP compliance stack test results on the A-Line Pouring, Cooling and Shakeout operations, the phenol, benzene and total organic HAP emission factors in pound per pound obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{APhT} , EF_{ABT} and EF_{ATOT} .~~

Change 11: Conditions D.2.12(d) and (e) (now D.2.10) have been deleted from the permit and the reporting condition for the HAPs limits has been deleted from Condition D.2.13.

D.2.102 Record Keeping Requirements

- (b) To document compliance with Condition D.2.9 **7 - Visible Emission Notation**, the Permittee shall maintain daily records of visible emission notations of the A-Line pouring, A-Line cooling, A-Line Holding Silo and Muller, and the A-Line Shakeout operation stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.2.40 **8 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the A-Line Holding Silo and Muller and the A-Line Shakeout operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (d) To document compliance with Condition D.2.3 **6(a)**, the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to each of the A-Line Pouring, Cooling, and Shakeout operations for each month;
 - ~~(2) Metallic HAP stack test results for the A-Line Pouring, Cooling, and Shakeout operations as applicable;~~
 - ~~(32) Metallic HAP emission calculations performed using the equations in condition D.2.8(a) **D.2.6(a)**; and~~
 - ~~(43) Metallic HAP emissions in tons per year month.~~
- (e) To document compliance with Condition D.2.4 **6(b)**, the Permittee shall maintain records of the following:
 - (1) pounds of resin used in the Cold Box core making operation for cores used in the A-Line for each month;
 - ~~(2) Organic HAP stack test results for the A-Line Pouring, Cooling, and Shakeout operations;~~
 - ~~(32) Organic HAP emission calculations performed using the equations in condition D.2.8(b); **D.2.6(b)** and~~
 - ~~(43) Organic HAP emissions in tons per year month.~~

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D.2.113 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1, ~~D.2.3, and D.2.4, including supporting calculations and data used for determining compliance with the HAP emission limits in conditions D.2.3 and D.2.4,~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 12: Conditions D.3.4 and D.3.5 have been deleted from the permit.

D.3.4 ~~Metallic HAP Minor Limit~~

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007:~~

- ~~(a) Total emissions of lead from the B-Line Pouring, Cooling, and Shakeout operations shall not exceed 0.65 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(b) Total emissions of manganese from the B-Line Pouring, Cooling, and Shakeout operations shall not exceed 1.36 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(c) Total emissions of any combination of metal HAPs from the B-Line Pouring, Cooling, and Shakeout operations shall not exceed 1.67 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (ton/yr)
B-Line Pouring, Cooling and Shakeout	Lead	0.65
	Manganese	1.36
	Total Metal HAPs	1.67

~~Compliance with the emission limits in paragraphs (a) and (b) above in conjunction with the other lead and manganese limits included in this permit shall limit source-wide lead emissions and source-wide manganese emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above in conjunction with the other combined HAP limits included in this permit shall limit source-wide emissions of any combination of HAPs to less than 25 tons per year.~~

D.3.5 ~~Organic HAP Minor Limit~~

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007,~~

- ~~(a) The emissions of phenol from the A-Line Pouring, Cooling and Shakeout operations (listed in section D.2) and the B-Line Pouring, Cooling and Shakeout operations combined together shall be less than 1.85 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(b) The emissions of benzene from the A-Line Pouring, Cooling and Shakeout operations (listed in section D.2) and the B-Line Pouring, Cooling and Shakeout operations combined together shall be less than 2.41 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(c) The emissions of any combination of organic HAPs from the A-Line Pouring, Cooling and Shakeout operations (listed in section D.2) and the B-Line Pouring, Cooling and Shakeout operations combined together shall be less than 2.41 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (tons/yr)
A-Line and B-Line Pouring, Cooling and Shakeout	Phenol	1.85
	Benzene	2.41
	Total Organic	2.41

Emission Unit	Pollutant	Emission Limit (tons/yr)
	HAPs	

~~Compliance with the emission limits in paragraphs (a) and (b) above in combination with the other phenol and benzene limits included in this permit shall limit source wide phenol emissions and source wide benzene emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above in combination with the other combined HAP limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

Change 13: Condition D.3.7 (now D.3.5) has been updated.

D.3.7 5 Particulate Matter (PM)

(b) In order to comply with Condition ~~D.0.1 D.3.4~~, the baghouse for PM and metallic HAP control shall be in operation at all times when the B-Line Shakeout is in operation.

Change 14: Conditions D.3.8 (c) and (d) have been deleted from the permit and this condition has been revised.

D.3.8 6 HAP Calculations

(a) Metal HAP Emissions for condition ~~D.0.1 D.3.4~~ shall be determined using the following equations:

(1) Lead Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/month yr) = $[EF_{BPPb} \text{ (lb/ton)} \times M_{BP} \text{ (tons per twelve (12) consecutive month period)}] + [EF_{BCPb} \text{ (lb/ton)} \times M_{BC} \text{ (tons per twelve (12) consecutive month period)}] + [EF_{BSPb} \text{ (lb/ton)} \times M_{BS} \text{ (tons per twelve (12) consecutive month period)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{BPPb} = 0.01617 pound lead per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{BP} = total metal throughput to the B-Line Pouring operation (tons per ~~twelve (12) consecutive month period~~)

EF_{BCPb} = 0.00539 pound lead per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{BC} = total metal throughput to the B-Line Cooling operation (tons per ~~twelve (12) consecutive month period~~)

EF_{BSPb} = 0.00256 pound lead per ton of metal throughput ~~(or an emission factor determined from the most recent compliance stack test)~~

M_{BS} = total metal throughput to the B-Line Shakeout operation (tons per ~~twelve (12) consecutive month period~~)

(2) Manganese Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/month yr) = $[EF_{BPMn} \text{ (lb/ton)} \times M_{BP} \text{ (tons per twelve (12) consecutive month period)}]$

$$\text{consecutive month period}] + [EF_{BCMn} \text{ (lb/ton)} \times M_{BC} \text{ (tons per } \text{twelve (12) consecutive month period})}] + [EF_{BSMn} \text{ (lb/ton)} \times M_{BS} \text{ (tons per } \text{twelve (12) consecutive month period})}] \times (1 \text{ ton} / 2000 \text{ pounds})$$

Where:

$$EF_{BPMn} = 0.1302 \text{ pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_{BP} = \text{total metal throughput to the B-Line Pouring operation (tons per } \text{twelve (12) consecutive month period})}$$

$$EF_{BCMn} = 0.0434 \text{ pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_{BC} = \text{total metal throughput to the B-Line Cooling operation (tons per } \text{twelve (12) consecutive month period})}$$

$$EF_{BSMn} = 0.0206 \text{ pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_{BS} = \text{total metal throughput to the B-Line Shakeout operation (tons per } \text{twelve (12) consecutive month period})}$$

(3) Total Metal HAP Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/month yr) = $[EF_{BPTM} \text{ (lb/ton)} \times M_{BP} \text{ (tons per } \text{twelve (12) consecutive month period})}] + [EF_{BCTM} \text{ (lb/ton)} \times M_{BC} \text{ (tons per } \text{twelve (12) consecutive month period})}] + [EF_{BSTM} \text{ (lb/ton)} \times M_{BS} \text{ (tons per } \text{twelve (12) consecutive month period})}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$$EF_{BPTM} = 0.1591 \text{ pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_{BP} = \text{total metal throughput to the B-Line Pouring operation (tons per } \text{twelve (12) consecutive month period})}$$

$$EF_{BCTM} = 0.053 \text{ pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_{BC} = \text{total metal throughput to the B-Line Cooling operation (tons per } \text{twelve (12) consecutive month period})}$$

$$EF_{BSTM} = 0.0252 \text{ pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_{BS} = \text{total metal throughput to the B-Line Shakeout operation (tons per } \text{twelve (12) consecutive month period})}$$

(b) Organic HAP Emissions for condition **D.01 D-3-5** shall be demonstrated using the following equations:

(1) Phenol Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/month yr) = $[EF_{BPh} \text{ (lb/lb)} \times R_{CBB} \text{ (pounds per } \text{twelve (12) consecutive month period})}]$

period) x (1 ton / 2000 pounds)] + 0.043 ton per **month year** from the green sand molding operation for molds used in the B-Line

Where:

$EF_{BPh} = 0.0039$ pound phenol per pound of Cold Box resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

$R_{CBB} =$ total resin usage in the Cold Box core making operation for cores used in the B-Line (pounds per ~~twelve (12) consecutive~~ month period)

- (2) Benzene Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/**month yr**) = [EF_{BB} (lb/lb) x R_{CBB} (pounds per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)] + 0.199 ton per **month year** from the green sand molding operation for molds used in the B-Line

Where:

$EF_{BB} = 0.00535$ pound benzene per pound of Cold Box resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

$R_{CBB} =$ total resin usage in the Cold Box core making operation for cores used in the B-Line (pounds per ~~twelve (12) consecutive~~ month period)

- (3) Total Organic HAP Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/**month yr**) = [EF_{BTO} (lb/lb) x R_{CBB} (pounds per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)] + 0.35 ton per **month year** from the green sand molding operation for molds used in the B-Line

Where:

$EF_{BTO} = 0.01236$ pound combined organic HAP per pound of Cold Box resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

$R_{CBB} =$ total resin usage in the Cold Box core making operation for cores used in the B-Line (pounds per ~~twelve (12) consecutive~~ month period)

~~(c) Upon IDEM approval of total metallic HAP compliance stack test results on the A-Line Pouring, Cooling and Shakeout operations listed in section D.2, the lead, manganese, and total metallic HAP emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{BPPbT} , EF_{BCPbT} , EF_{BSPbT} , EF_{BPMnT} , EF_{BCMnT} , EF_{BSMnT} , EF_{BPTMT} , EF_{BCTMT} , and EF_{BSTMT} .~~

~~(d) Upon IDEM approval of total organic HAP compliance stack test results on the A-Line Pouring, Cooling and Shakeout operations listed in section D.2, the phenol, benzene and total organic HAP emission factors in pound per pound obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{BPhT} , EF_{BB} and EF_{BTO} .~~

Change 15: Conditions D.3.12(d) and (e) have been deleted from the per and the reporting condition for the HAPs limits has been deleted from Condition D.3.13.

D.3.102 Record Keeping Requirements

- (b) To document compliance with Condition ~~D.3.9~~ **7 - Visible Emission Notation**, the Permittee shall maintain daily records of visible emission notations of the B-Line pouring, B-Line Holding Silo and Muller, and the B-Line Shakeout operation stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document compliance with Condition ~~D.3.40~~ **8 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop across the baghouses controlling the B-Line Holding Silo and Muller, and the B-Line Shakeout operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (d) To document compliance with Condition ~~D.3.4~~ **D.3.6(a)**, the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to each of the B-Line Pouring, Cooling, and Shakeout operations for each month;
 - ~~(2) Metallic HAP stack test results for the A-Line Pouring, Cooling, and Shakeout operations as applicable;~~
 - ~~(32)~~ Metallic HAP emission calculations performed using the equations in condition ~~D.3.8(a);~~ **D.3.6(a)**; and
 - ~~(43)~~ Metallic HAP emissions in tons per year.
- (e) To document compliance with Condition ~~D.3.5~~ **D.3.6(b)**, the Permittee shall maintain records of the following:
 - (1) pounds of resin used in the Cold Box core making operation for cores used in the B-Line for each month;
 - ~~(2) Organic HAP stack test results for the A-Line Pouring, Cooling, and Shakeout operations;~~
 - ~~(32)~~ Organic HAP emission calculations performed using the equations in condition ~~D.3.8(b);~~ **D.3.6(b)**; and
 - ~~(43)~~ Organic HAP emissions in tons per ~~year~~ **month**.

~~D.3.11~~ **Reporting Requirements**

A quarterly summary of the information to document compliance with Conditions D.3.1(a) and D.3.1(b), ~~D.3.4 and D.3.5, including supporting calculations and data used for determining compliance with the HAP emission limits in conditions D.3.4 and D.3.5,~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 16: Conditions D.4.4 and D.4.5 have been deleted from the permit.

~~D.4.4~~ **Metallic HAP Minor Limit**

Pursuant to SPM 091-20949-00020 issued on April 19, 2007:

- (a) ~~The total emissions of lead from the Floor Pouring, Cooling, Shakeout, and Knockout operations shall be less than 0.83 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (b) ~~The total emissions of manganese from the Floor Pouring, Cooling, Shakeout, and Knockout operations shall be less than 0.93 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (c) ~~The total emissions of any combination of metal HAPs from the Floor Pouring, Cooling, Shakeout, and Knockout operations shall be less than 1.14 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (d) ~~The emissions of lead from the Wheelabrator shot blast machine shall be less than 3.52 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (e) ~~The emissions of manganese from the Wheelabrator shot blast machine shall be less than 3.00 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (f) ~~The emission of any combination of metal HAPs from the Wheelabrator shot blast machine shall be less than 3.52 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (ton/yr)
Floor Pouring, Cooling, Shakeout and Knockout	Lead	0.83
	Manganese	0.93
	Total HAPs	1.14
Wheelabrator Shot Blast Machine	Lead	3.52
	Manganese	3.00
	Total HAPs	3.52

~~Compliance with the emission limits in paragraphs (a), (b), (d) and (e) above in combination with the other lead and manganese limits included in this permit shall limit source wide lead emissions and source wide manganese emissions to less than 10 tons per year, each. Compliance with the limits in paragraphs (c) and (f) above in combination with the other combined HAP limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

D.4.5 Organic HAP Minor Limit

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007:~~

- (a) ~~The total emissions of xylene from the High Speed Continuous Sand Mixer shall be less than 0.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (b) ~~The total emissions of any combination of organic HAPs from the High Speed Continuous Sand Mixer shall be less than 0.90 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (c) ~~The emissions of phenol from the Floor Pouring, Cooling and Shakeout operations combined shall be less than 1.48 tons per twelve (12) consecutive month period, with~~

~~compliance determined at the end of each month;~~

- ~~(d) The emissions of benzene from the Floor Pouring, Cooling and Shakeout operations combined shall be less than 1.48 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(e) The emissions of any combination of organic HAPs from the Floor Pouring, Cooling and Shakeout operations combined shall be less than 1.48 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (tons/yr)
Floor Pouring, Cooling and Shakeout	Phenol	1.48
	Benzene	1.48
	Total Organic HAPs	1.48
High Speed Continuous Sand Mixer	Xylene	0.90
	Total Organic HAPs	0.90

~~Compliance with the emission limits in paragraphs (a), (c), and (d) above in combination with the other phenol, benzene, and xylene limits included in this permit shall limit source wide phenol, benzene, and xylene emissions to less than 10 tons per year, each. Compliance with the limits in paragraphs (b) and (e) above in combination with the other combined HAP emission limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

Change 17: The Testing Requirements for the total organic HAPs has been deleted from the permit and Condition D.4.7(a) has been updated..

D.4.75 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- ~~(a) Within 180 days after issuance of this Permit T091-24543-00020, in order to determine compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform PM and PM₁₀ testing **before October 2013** on each of the baghouses controlling the High Speed Continuous Sand Mixer hopper, the Knockout Station and the Wheelabrator shot blast machine, identified as 30-DC-6, 8-DC-2 and 36-DC-8, respectively, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~
- ~~(b) Within nine (9) months after issuance of this Permit T091-24543-00020, in order to determine compliance with Condition D.4.5, the Permittee shall perform total organic HAP testing on the High Speed Continuous Sand Mixer, total metal HAPs on the wheelabrator shotblast machine and any single HAPs on the wheelabrator shotblast machine, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

Change 18: Conditions D.4.8 (b) has been deleted from the permit.

D.4.8 6 Particulate Matter (PM)

- (b) In order to comply with Condition **D.0.1 D-4.4**, the baghouse for PM control and metallic HAP shall be in operation at all times when the the floor knockout Station and the wheelabrator shot blast machine are in operation

Change 19: Conditions D.4.8 (c), (d) and (e) have been deleted from the permit.

D.4.9 7 HAP Calculations

- (a) Metal HAP Emissions for condition **D.0.1 D-4.4** shall be determined using the following equations:

- (1) Lead Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month yr) = [EF_{FPPb} (lb/ton) x M_{FP} (tons per ~~twelve (12)~~ consecutive month period)] + [EF_{FCPb} (lb/ton) x M_{FC} (tons per ~~twelve (12)~~ consecutive month period)] + [EF_{FSPb} (lb/ton) x M_{FS} (tons per ~~twelve (12)~~ consecutive month period)] + [EF_{FKPb} (lb/ton) x M_{FK} (tons per ~~twelve (12)~~ consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{FPPb} = 0.01617 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{FP} = total metal throughput to the Floor Pouring operation (tons per ~~twelve (12)~~ consecutive month period)

EF_{FCPb} = 0.00539 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{FC} = total metal throughput to the Floor Cooling operation (tons per ~~twelve (12)~~ consecutive month period)

EF_{FSPb} = 0.01232 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{FS} = total metal throughput to the Floor Shakeout operation (tons per ~~twelve (12)~~ consecutive month period)

EF_{FKPb} = 0.0256 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

EF_{FK} = total metal throughput to the Floor Knockout operation (tons per ~~twelve (12)~~ consecutive month period)

- (2) Manganese Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month yr) = [EF_{FPMn} (lb/ton) x M_{FP} (tons per ~~twelve (12)~~ consecutive month period)] + [EF_{FCMn} (lb/ton) x M_{FC} (tons per ~~twelve (12)~~ consecutive month period)] + [EF_{FSPMn} (lb/ton) x M_{FS} (tons per ~~twelve (12)~~ consecutive month period)] + [EF_{FKMn} (lb/ton) x M_{FK} (tons per ~~twelve (12)~~ consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{FPMn} = 0.1302 pound manganese per ton of metal throughput (or an emission

~~factor determined from the most recent compliance stack test)~~

M_{FP} = total metal throughput to the Floor Pouring operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

EF_{FCMn} = 0.0434 pound manganese per ton of metal throughput ~~(or an emission~~
~~factor determined from the most recent compliance stack test)~~

M_{FC} = total metal throughput to the Floor Cooling operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

EF_{FSMn} = 0.0992 pound manganese per ton of metal throughput ~~(or an emission~~
~~factor determined from the most recent compliance stack test)~~

M_{FS} = total metal throughput to the Floor Shakeout operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

EF_{FKMn} = 0.0206 pound manganese per ton of metal throughput ~~(or an emission~~
~~factor determined from the most recent compliance stack test)~~

EF_{FK} = total metal throughput to the Floor Knockout operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

(3) Total Metal HAP Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/~~month~~yr) = $[EF_{FPTM}$ (lb/ton) x M_{FP} (tons per ~~twelve~~ (12) ~~consecutive month period~~)] + $[EF_{FCTM}$ (lb/ton) x M_{FC} (tons per ~~twelve~~ (12) ~~consecutive month period~~)] + $[EF_{FSTM}$ (lb/ton) x M_{FS} (tons per ~~twelve~~ (12) ~~consecutive month period~~)] + $[EF_{FKTM}$ (lb/ton) x M_{FK} (tons per ~~twelve~~ (12) ~~consecutive month period~~)] x (1 ton / 2000 pounds)

Where:

EF_{FPTM} = 0.1591 pound combined metal HAP per ton of metal throughput ~~(or an~~
~~emission factor determined from the most recent compliance stack test)~~

M_{FP} = total metal throughput to the Floor Pouring operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

EF_{FCTM} = 0.053 pound combined metal HAP per ton of metal throughput ~~(or an~~
~~emission factor determined from the most recent compliance stack test)~~

M_{FC} = total metal throughput to the Floor Cooling operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

EF_{FSTM} = 0.12122 pound combined metal HAP per ton of metal throughput ~~(or an~~
~~emission factor determined from the most recent compliance stack test)~~

M_{FS} = total metal throughput to the Floor Shakeout operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

EF_{FKTM} = 0.0252 pound combined metal HAP per ton of metal throughput ~~(or an~~
~~emission factor determined from the most recent compliance stack test)~~

EF_{FK} = total metal throughput to the Floor Knockout operation (tons per ~~twelve~~
~~(12) consecutive month period~~)

(4) Lead Emissions from the Wheelabrator shot blast machine (tons/~~month~~yr) =

$$EF_{WPb} \text{ (lb/ton)} \times M_W \text{ (tons per } \text{twelve (12) consecutive month period})} \times (1 \text{ ton} / 2000 \text{ pounds})$$

Where:

$$EF_{WPb} = 0.00137 \text{ pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_W = \text{total metal throughput to the Wheelabrator shot blast machine (tons per } \text{twelve (12) consecutive month period})$$

(5) Manganese Emissions from the Wheelabrator shot blast machine (tons/yr) = $EF_{WMn} \text{ (lb/ton)} \times M_W \text{ (tons per } \text{twelve (12) consecutive month period})} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$$EF_{WMn} = 0.0111 \text{ pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_W = \text{total metal throughput to the Wheelabrator shot blast machine (tons per } \text{twelve (12) consecutive month period})$$

(6) Total Metal HAP Emissions from the Wheelabrator shot blast machine (tons/month yr) = $EF_{WTM} \text{ (lb/ton)} \times M_W \text{ (tons per } \text{twelve (12) consecutive month period})} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$$EF_{WTM} = 0.0135 \text{ pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$$

$$M_W = \text{total metal throughput to the Wheelabrator shot blast machine (tons per } \text{twelve (12) consecutive month period})$$

(b) Organic HAP Emissions for condition ~~D.4.5~~ **D.0.1(d) and (e)** shall be determined using the following equations:

(1) Phenol Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month yr) = $EF_{FPh} \text{ (lb/lb)} \times R_{NB} \text{ (pounds per } \text{twelve (12) consecutive month period})} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$$EF_{FPh} = 0.0039 \text{ pound phenol per pound of No Bake resin used (or an emission factor determined from the most recent compliance stack test)}$$

$$R_{NB} = \text{total resin usage in the No Bake core making operation and High Speed Continuous Sand Mixer (pounds per } \text{twelve (12) consecutive month period})$$

(2) Benzene Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/yr) = $EF_{FB} \text{ (lb/lb)} \times R_{NB} \text{ (pounds per } \text{twelve (12) consecutive month period})} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$$EF_{FB} = 0.00535 \text{ pound benzene per pound of No Bake resin used (or an emission factor determined from the most recent compliance stack test)}$$

$$R_{NB} = \text{total resin usage in the No Bake core making operation and High}$$

Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive~~
month ~~period~~)

- (3) Total Organic HAP Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/month yr) = EF_{FTO} (lb/lb) x R_{NB} (pounds per ~~twelve (12) consecutive~~ month ~~period~~) x (1 ton / 2000 pounds)

Where:

EF_{FTO} = 0.01236 pound combined organic HAP per pound of No Bake resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

R_{NB} = total resin usage in the No Bake core making operation and High Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive~~ month ~~period~~)

- (4) Xylene Emissions from the High Speed Continuous Sand Mixer (tons/month yr) = $[EF_{MR1X}$ (lb/lb) x R_{MNB1} (pounds per ~~twelve (12) consecutive~~ month ~~period~~)] + $[EF_{MCX}$ (lb/lb) x C_{MNB} (pounds per ~~twelve (12) consecutive~~ month ~~period~~)] x (1 ton / 2000 pounds)

Where:

EF_{MR1X} = 0.001 pound xylene per pound of No Bake Part I resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

R_{MNB1} = total No Bake Part I resin usage in the High Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive~~ month ~~period~~)

EF_{MCX} = 0.0489 pound xylene per pound of No Bake catalyst used (based on MSDS for catalyst)

C_{MNB} = total No Bake catalyst usage in the High Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive~~ month ~~period~~)

- (5) Total HAP Emissions from the High Speed Continuous Sand Mixer (tons/yr) = $[EF_{MR1TO}$ (lb/lb) x R_{MNB1} (pounds per ~~twelve (12) consecutive~~ month ~~period~~)] + $[EF_{MR2TO}$ (lb/lb) x R_{MNB2} (pounds per ~~twelve (12) consecutive~~ month ~~period~~)] + $[EF_{MCTO}$ (lb/lb) x C_{MNB} (pounds per ~~twelve (12) consecutive~~ month ~~period~~)] x (1 ton / 2000 pounds)

Where:

EF_{MR1TO} = 0.0032 pound total organic HAPs per pound of No Bake Part I resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

R_{MNB1} = total No Bake Part I resin usage in the High Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive~~ month ~~period~~)

EF_{MR2TO} = 0.002 pound total organic HAPs per pound of No Bake Part II resin used ~~(or an emission factor determined from the most recent compliance stack test)~~

R_{MNB2} = total No Bake Part II resin usage in the High Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive~~ month ~~period~~)

EF_{MCTO} = 0.0698 pound total organic HAPs per pound of No Bake catalyst

used(based on MSDS for catalyst)

C_{MNB} = total No Bake catalyst usage in the High Speed Continuous Sand Mixer (pounds per ~~twelve (12) consecutive month period~~)

- ~~(c) Upon IDEM approval of any HAP compliance stack test results on the Floor Pouring, Cooling, Shakeout, or Knockout operations, the HAP emission factors obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{FPPbT} , EF_{FCPbT} , EF_{FSPbT} , EF_{FKPbT} , EF_{FPMnT} , EF_{FCMnT} , EF_{FSMnT} , EF_{FKMnT} , EF_{FPTM} , EF_{FCTM} , EF_{FSTM} , EF_{FKTM} , EF_{FPh} , EF_{FB} , and EF_{FTO} , as applicable.~~
- ~~(d) Upon IDEM approval of any HAP compliance stack test results on the Wheelabrator Shot Blast machine, the HAP emission factors obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{WPbT} , EF_{WMnT} , and EF_{WTM} as applicable.~~
- ~~(e) Upon IDEM approval of total organic HAP compliance stack test results on the High Speed Continuous Sand Mixer, the xylene and total organic HAP emission factors in pound per pound obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{MR1X} , EF_{MR1TO} , and EF_{MR2TO} .~~

Change 20: Conditions D.4.13(g) and (h) (now 4.11) has been deleted from the per and the reporting condition for the HAPs limits has been deleted from Condition D.3.13.

~~D.4.11~~ Record Keeping Requirements

- ~~(e)~~ To document compliance with Condition ~~D.4.10~~ **8 -Visible Emission notation**, the Permittee shall maintain daily records of visible emission notations of the, High Speed Continuous Sand Mixer stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- ~~(f)~~ To document compliance with Condition ~~D.4.11~~ **D.4.9 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop across the baghouses controlling the High Speed Continuous Sand Mixer hopper, the Knockout Station, and the Wheelabrator shot blast machine operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- ~~(g)~~ To document compliance with Condition ~~D.4.4~~ **D.4.7(a)**, the Permittee shall maintain records of the following:
 - ~~(3)~~ ~~HAP stack test results for the Floor Pouring, Cooling, Shakeout, and Knockout operations or the Wheelabrator shot blast machine as applicable;~~
 - ~~(4 3)~~ Metallic HAP emission calculations performed using the equations in condition ~~D.4.9(a)~~ **D4.7(a)**; and
 - ~~(54)~~ Metallic HAP emissions in tons per ~~year~~ **month**.
- ~~(h)~~ To document compliance with Condition ~~D.4.5~~ **D.4.7(b)**, the Permittee shall maintain records of the following:

- ~~(2) Organic HAP stack test results for the High Speed Continuous Sand Mixer;~~
 - ~~(32) Organic HAP emission calculations performed using the equations in condition D.4.9(b) **D.4.7(b)**; and~~
 - ~~(43) Organic HAP emissions in tons per year **month**.~~
-

D.4.12 4 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.4.1(b), D.4.1(d), D.4.1(e), D.4.1(g), **and D.4.3(a), D.4.3(e), D.4.4 and D.4.5, including supporting calculations and data used for determining compliance with the HAP emission limits in conditions D.4.4 and D.4.5,** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 21: The HAPs limits in Conditions D.5.2 and the Testing Requirements have been deleted.

D.5.2 HAP Minor Limit

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007:~~

- ~~(a) The emissions of lead from the Chill Iron shot blast machine shall be less than 0.20 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(b) The emissions of manganese from the Chill Iron shot blast machine shall be less than 0.17 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(c) The emissions of any combination of metal HAPs from the Chill Iron shot blast machine shall be less than 0.20 ton per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

A summary of these limits is included in the following table:

Emission Unit	Pollutant	Emission Limit (ton/yr)
Chill Iron shot blast machine	Lead	0.20
	Manganese	0.17
	Total HAPs	0.20

~~Compliance with the emission limits in paragraphs (a) and (b) above in combination with the other lead and manganese limits included in this permit shall limit source wide lead emissions and source wide manganese emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above in combination with the other combined HAP limits included in this Permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

D.5.4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

~~Within nine (9) months after issuance of this Permit T091-24543-00020, in order to determine compliance with Condition D.5.2, the Permittee shall perform lead and manganese testing and total metal HAP testing on the Chill Iron Shot blast machine, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of~~

~~this valid compliance demonstration. Testing shall be conducted in accordance with Section C-
Performance Testing.~~

Change 22: Condition D.5.5 (now D.5.3) has been updated in the permit.

D.5.5 3 Particulate Matter (PM)

- (a) In order to comply with Conditions D.5.1 and **D.0.1 D-5.2**, the baghouse for PM and metallic **HAP** control shall be in operation at all times when the Chill Iron shot blast machine process is in operation.
-

Change 23: Condition D.5.6 (now D.5.4) has been updated in the permit.

D.5.6 4 HAP Calculations

Compliance with the HAP limits in condition **D.0.1 D-5.2** shall be demonstrated using the following equations:

- (a) Lead Emissions from the Chill Iron shot blast machine (tons/~~month~~yr) = EF_{ChPb} (lb/ton) x M_{Ch} (tons per ~~twelve (12) consecutive month period~~) x (1 ton / 2000 pounds)

Where:

EF_{ChPb} = 0.0013 pound lead per ton of metal throughput (~~or an emission factor determined from the most recent compliance stack test~~)

M_{Ch} = total metal throughput to the Chill Iron shot blast machine (tons per ~~twelve (12) consecutive month period~~)

- (b) Manganese Emissions from the Chill Iron shot blast machine (tons/yr) = EF_{ChMn} (lb/ton) x M_{Ch} (tons per ~~twelve (12) consecutive month period~~) x (1 ton / 2000 pounds)

Where:

EF_{ChMn} = 0.0105 pound manganese per ton of metal throughput (~~or an emission factor determined from the most recent compliance stack test~~)

M_{Ch} = total metal throughput to the Chill Iron shot blast machine (tons per ~~twelve (12) consecutive-month period~~)

- (c) Total Metal HAP Emissions from the Chill Iron shot blast machine (tons/~~month~~ yr) = EF_{ChTM} (lb/ton) x M_{Ch} (tons per ~~twelve (12) consecutive month period~~) x (1 ton / 2000 pounds)

Where:

EF_{ChTM} = 0.0128 pound combined metal HAP per ton of metal throughput (~~or an emission factor determined from the most recent compliance stack test~~)

M_{Ch} = total metal throughput to the Chill Iron shot blast machine (tons per ~~twelve (12) consecutive month period~~)

- ~~(d) Upon IDEM approval of any HAP compliance stack test results on the Chill Iron Shot Blast machine, the HAP emission factors obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{ChPb} , EF_{ChMn} , and EF_{ChTM} as applicable.~~

Change 24: Condition D.5.9(b) has been deleted from the permit and the reporting condition for the HAPs limits has been deleted from Condition D.5.10.

D.5.97 Record Keeping Requirement

- (a) To document compliance with Condition D.5.7 **5 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop the across the baghouse controlling the Chill iron shot blast stack exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
- (b) To document compliance with Condition ~~D.5.2~~ **D.5.4**, the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to the Chill Iron shot blast machine for each month;
 - (2) ~~HAP stack test results for the Chill Iron shot blast machine as applicable;~~
 - (32) Metallic HAP emission calculations performed using the equations in condition ~~D.5.6~~ **D.5.4**; and
 - (43) Metallic HAP emissions in tons per ~~year~~ **month**.

D.5.10 Reporting Requirement

~~A quarterly summary of the information to document compliance with Condition D.5.2, including supporting calculations and data used for determining compliance with the HAP emission limits in condition D.5.2, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

Change 25: The HAPs limits in Conditions D.6.3 has been deleted from the permit.

D.6.3 HAP Minor Limit

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007:~~

- (a) ~~The emissions of lead from the scrap handling rotary reclaimer shall be less than 0.32 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (b) ~~The emissions of manganese from the scrap handling rotary reclaimer shall be less than 0.27 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- (c) ~~The emissions of any combination of metal HAPs from the scrap handling rotary reclaimer shall be less than 0.32 ton per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (ton/yr)
Scrap Handling Rotary Reclaimer	Lead	0.32
	Manganese	0.27
	Total HAPs	0.32

~~Compliance with the emission limits in paragraphs (a) and (b) above in combination with the other~~

~~lead and manganese limits included in this permit shall limit source wide lead emissions and source wide manganese emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above in conjunction with the other combined HAP limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

Change 26: The date for the Testing Requirement has been updated and Condition D.6.5 (b) has been deleted from the permit.

D.6.5 4 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- (a) In order to determine compliance with Conditions D.6.1 and D.6.2, the Permittee shall perform PM and PM₁₀ testing by July ~~2008~~ **2013** on the baghouse that exhausts through stack No. 39-DC-5 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination. Testing shall be conducted in accordance with Section C- Performance Testing.
- ~~(b) Within nine (9) months after issuance of this Permit T091-24543-00020, in order to determine compliance with Condition D.6.3, the Permittee shall perform lead and manganese testing and total metal HAPs testing on the indoor scrap handling operation utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination. Testing shall be conducted in accordance with Section C - Performance Testing.~~

Change 27: Condition D.6.6 (now D.6.5) has been updated in the permit.

D.6.65 Particulate Matter (PM)

- (b) In order to comply with Condition ~~D.6.3~~ **D.01**, the baghouse for PM and metallic HAP control shall be in operation at all times when the New scrap handling crusher operation is in operation.
-

Change 28: Condition D.6.7 - HAPs Calculations has been updated in the permit.

D.6.7 6 HAP Calculations

Emissions of HAP in condition **D.0.1** ~~D.6.3~~ shall be determined using the following equations:

- (a) Lead Emissions from the scrap handling rotary reclaimer (tons/~~month~~) = $EF_{RRPb} \text{ (lb/ton)} \times M_{RR} \text{ (tons per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{RRPb} = 0.00014 \text{ pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$

$M_{RR} = \text{total metal throughput to the scrap handling rotary reclaimer (tons per twelve (12) consecutive month period)}$

- (b) Manganese Emissions from the scrap handling rotary reclaimer (tons/~~month~~) = $EF_{RRMn} \text{ (lb/ton)} \times M_{RR} \text{ (tons per twelve (12) consecutive month period)} \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

$EF_{RRMn} = 0.0011 \text{ pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)}$

M_{RR} = total metal throughput to the scrap handling rotary reclaimer (tons per ~~twelve~~
~~(12) consecutive month period~~)

(c) Total HAP Emissions from the scrap handling rotary reclaimer (tons/~~month~~) = EF_{RRTM}
(lb/ton) x M_{RR} (tons per ~~twelve (12) consecutive month period~~) x (1 ton / 2000 pounds)

Where:

EF_{RRTM} = 0.0013 pound combined metal HAP per ton of metal throughput (~~or an emission
factor determined from the most recent compliance stack test~~)

M_{RR} = total metal throughput to the scrap handling rotary reclaimer (tons per ~~twelve~~
~~(12) consecutive month period~~)

~~(d) Upon IDEM approval of any HAP compliance stack test results on the scrap handling
rotary reclaimer, the HAP emission factors obtained from the IDEM approved stack test
results shall be used for the variables identified above as EF_{RRPb} , EF_{RRMn} , and EF_{RRTM} as
applicable.~~

Change 29: Condition D.6.11(e) (now D.6.10) has been deleted from the permit and the references to
the HAPs limits in the reporting condition has been deleted from Condition D.6.12
(now D.6.11).

D.6.10 4 Record Keeping Requirement

-
- (c) To document compliance with Condition D.6.8 **7 - Visible Emission Notation** the Permittee shall maintain daily records of visible emission notations of the indoor scrap handling operation and the raw sand storage silo stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
 - (d) To document compliance with Condition D.6.9 **8 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the indoor scrap handling operation and the raw sand storage silo. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day);
 - (e) To document compliance with Condition ~~D.6.3~~ **D.6.6**, the Permittee shall maintain records of the following:
 - (1) tons of metal throughput to the scrap handling rotary reclaimer for each month;
 - ~~(2) HAP stack test results for the scrap handling rotary reclaimer as applicable;~~
 - ~~(3)~~ **2** Metallic HAP emission calculations performed using the equations in condition ~~D.6.7~~ **D.6.6**; and
 - ~~(4)~~ **3** Metallic HAP emissions in tons per ~~year~~ **month**.
-

D.6.11 2 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(c) **and** (d) ~~and D.6.3, including supporting calculations and data used for determining compliance with the HAP emission limits in condition D.6.3,~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Change 30: Condition D.7.3 - HAP Minor Limit has been deleted from the permit.

~~D.7.3 HAP Minor Limit~~

~~Pursuant to SPM 091-20949-00020 issued on April 19, 2007:~~

- ~~(a) The total emissions of xylene from the No Bake core making operation shall be less than 0.80 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(b) The total emissions of any combination of HAPs from the No Bake core making operation shall be less than 0.80 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(c) The total emissions of ethylene glycol from the Warm Box core making operation shall be less than 5.22 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(d) The total emissions of phenol from the Warm Box core making operation shall be less than 4.03 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~
- ~~(e) The total emissions of any combination of HAPs from the Warm Box core making operation shall be less than 5.22 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~A summary of these limits is included in the following table:~~

Emission Unit	Pollutant	Emission Limit (tons/yr)
No Bake Core Making	Xylene	0.80
	Total HAPs	0.80
Warm Box Core Making	Ethylene glycol	5.22
	Phenol	4.03
	Total HAPs	5.22

~~Compliance with the emission limits in paragraphs (a) and (d) above in combination with other xylene and phenol limits included in this permit shall limit source wide xylene and phenol emissions to less than 10 tons per year, each. Compliance with the limit in paragraph (c) above shall limit source wide ethylene glycol emissions to less than 10 tons per year. Compliance with the limits in paragraphs (b) and (e) above in combination with other combined HAP limits included in this permit shall limit source wide emissions of any combination of HAPs to less than 25 tons per year.~~

~~**The requirements in paragraphs (c), (d) and (e) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.**~~

Change 31: Conditions D.7.4 and D.7.5 have been updated in the permit. This ATSD becomes part of the TSD.

~~D.7.34 PSD Minor Limits [326 IAC 2-2]~~

~~The VOC emissions from the Phenolic urethane Core making operation, identified as core machines #1, #2 and #3 shall be limited as follows:~~

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 (core machines #1, #2 and #3) shall not exceed 32 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = \frac{[(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{Ef2} \times \text{E2}/100)]}{2000 \text{ lbs/ton}}$$

Where:

Ef1 = 1.0 pounds per ton of core sand;

Ef2 = 1.0 pounds per ton of catalyst

~~E2 = VOC control efficiency in % from the scrubber determined by the most recent IDEM approved stack test.~~

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the phenolic urethane core making operation to less than 40 tons per year and render 326 IAC 2-2 (PSD) not applicable to the CB-2 isocure cold box core making process.

D.7.4 5 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The VOC emissions from the CB-2 core machine #3 shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 core machine #3 shall not exceed 20.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = \frac{[(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{Ef2} \times \text{E2}/100)]}{2000 \text{ lbs/ton}}$$

Where:

Ef1 = 1.0 pounds per ton of core sand;

Ef2 = 1.0 pounds per ton of catalyst

~~E2 = VOC control efficiency in % from the scrubber determined by the most recent IDEM approved stack test.~~

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the CB-2 cold box core machine #3 to less than 25 tons per year and render 326 IAC 8-1-6 (New Facilities, General Reduction requirements) not applicable to the CB-2 cold box core machine #3.

Change 32: The Testing Requirements in Condition D.7.7(b) (now D.7.6) has been deleted from the permit and new condition D.7.6(b) has been updated..

D.7.7 6 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

(a) *****

- (b) ~~Within nine (9) months after issuance of Permit T091-24543-00020, in order to demonstrate compliance with Condition D.7.3, the Permittee shall perform total organic HAP and any single HAP testing on the No Bake core making machine, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.~~
- (e b) Within one hundred and eighty (180) days after the startup of the core machines, identified as #1, #2 and #3, in order to determine compliance with Condition D.7.34 and D.7.4 5, the Permittee shall perform VOC control efficiency testing on the scrubber controlling the CB-2 cold box core machines #1, #2 and #3, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Change 33: Condition D.7.8 (now D.7.7) has been updated in the permit.

D.7.78 Control Equipment

- (d) In order to comply with Condition ~~D.7.4~~ **D.7.3**, the scrubber for DMIPA control shall be in operation and control emissions from the cold box core machines, identified as #1, #2 and #3 at all times that any of the core machines is in operation.

Change 34: Conditions D.7.9(f) (now D.7.8) has been deleted from the permit.

D.7.89 HAP Calculations

Emissions of HAP limits in condition **D.0.1** ~~D.7.3~~ shall be determined using the following equations:

- (a) Xylene Emissions from the No Bake core making operation (tons/month) = $[EF_{NBR1X} \text{ (lb/lb)} \times R_{CNB1} \text{ (pounds per twelve (12) consecutive month period)}] + [EF_{NBCX} \text{ (lb/lb)} \times C_{CNB} \text{ (pounds per twelve (12) consecutive month period)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{NBR1X} = 0.001 pound xylene per pound of No Bake Part I resin used ~~(or an emission rate determined from the most recent compliance stack test)~~

R_{CNB1} = total No Bake Part I resin usage in the No Bake core making operation ~~(pounds per twelve (12) consecutive month period)~~

EF_{NBCX} = 0.0489 pound xylene per pound of No Bake catalyst used (based on MSDS for catalyst)

C_{CNB} = total No Bake catalyst usage in the No Bake core making operation ~~(pounds per twelve (12) consecutive month period)~~

- (b) Total Organic HAP Emissions from the No Bake core making operation (tons/month) = $[EF_{NBR1TO} \text{ (lb/lb)} \times R_{CNB1} \text{ (pounds per twelve (12) consecutive month period)}] + [EF_{NBR2TO} \text{ (lb/lb)} \times R_{CNB2} \text{ (pounds per twelve (12) consecutive month period)}] + [EF_{NBCTO} \text{ (lb/lb)} \times C_{CNB} \text{ (pounds per twelve (12) consecutive month period)}] \times (1 \text{ ton} / 2000 \text{ pounds})$

Where:

EF_{NBR1TO} = 0.0032 pound total organic HAPs per pound of No Bake Part I resin used ~~(or an emission rate determined from the most recent compliance stack test)~~

R_{CNB1} = total No Bake Part I resin usage in the No Bake core making operation (pounds per ~~twelve (12) consecutive~~ month period)

EF_{NBR2TO} = 0.002 pound total organic HAPs per pound of No Bake Part II resin used (~~or an emission rate determined from the most recent compliance stack test~~)

R_{CNB2} = total No Bake Part II resin usage in the No Bake core making operation (pounds per ~~twelve (12) consecutive~~ month period)

EF_{NBCTO} = 0.0698 pound total organic HAPs per pound of No Bake catalyst used (based on MSDS for catalyst)

C_{CNB} = total No Bake catalyst usage in the No Bake core making operation (pounds per twelve (12) consecutive month period)

(c) Ethylene Glycol Emissions from the Warm Box core making operation (tons/~~month yr~~) = EF_{WBEG} (lb/lb) x C_{WB} (pounds per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)

Where:

EF_{WBEG} = 0.08 pound ethylene glycol per pound of Warm Box catalyst used (based on MSDS for catalyst)

C_{WB} = total Warm Box catalyst usage in the Warm Box core making operation (pounds per ~~twelve (12) consecutive~~ month period)

(d) Phenol Emissions from the Warm Box core making operation (tons/~~monthyr~~) = E_{WBPh} (lb/lb) x C_{WB} (pounds per ~~twelve (12) consecutive~~ month period) x (1 ton / 2000 pounds)

Where:

E_{WBPh} = 0.06 pound phenol per pound of Warm Box catalyst used (based on MSDS for catalyst)

C_{WB} = total Warm Box catalyst usage in the Warm Box core making operation (pounds per ~~twelve (12) consecutive~~ month period)

(e) Total HAP Emissions from the Warm Box core making operation (tons/~~monthyr~~) = [EF_{WBRTO} (lb/lb) x R_{WB} (pounds per ~~twelve (12) consecutive~~ month period)] + [EF_{WBCTO} (lb/lb) x C_{WB} (pounds per ~~twelve (12) consecutive~~ month period)] x (1 ton / 2000 pounds)

Where:

EF_{WBRTO} = 0.00075 pound total organic HAPs per pound of Warm Box resin used

R_{WB} = total Warm Box resin usage in the Warm Box core making operation (pounds per ~~twelve (12) consecutive~~ month period)

EF_{WBCTO} = 0.14 pound total organic HAPs per pound of Warm Box catalyst used (based on MSDS for catalyst)

C_{WB} = total Warm Box catalyst usage in the Warm Box core making operation (pounds per ~~twelve (12) consecutive~~ month period)

(f) ~~Upon IDEM approval of total organic HAP compliance stack test results on the No Bake core making operation, the xylene and total organic HAP emission factors in pound per pound obtained from the IDEM approved stack test results shall be used for the variables~~

~~identified above as EF_{NBR1X1}, EF_{NBR1T07} and EF_{NBR2T07}~~

The requirements in paragraphs (c), (d) and (e) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.

Change 35: Condition D.7.14(c) (now D.7.13) has been deleted from the permit and the reporting condition for the HAPs limits has been deleted from Condition D.7.3.

~~D.7.13 4~~ Record Keeping Requirement

-
- (c) To document compliance with Condition D.7.83, the Permittee shall maintain records of the following:
 - (1) pounds of combined catalyst and combined resin usage for the Warm Box core machines for each month;
 - ~~(2) Organic HAP stack test results for the No Bake core making operation;~~
 - ~~(32)~~ Organic HAP emission calculations performed using the equations in condition ~~D.7.7~~ **D.7.8**; and
 - ~~(43)~~ Organic HAP emissions in tons per year **month**.

The requirements in paragraphs (c)(1) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.

- (d) To document compliance with Condition D.7.940 - Visible Emission Notation, the Permittee shall maintain daily records of visible emission notations of the for the baghouse controlling the Cold Box Line Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the CB-2 Mixers and hopper, and the core and mold sand hopper stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (e) To document compliance with Condition D.7.1044 - Parametric Monitoring, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the Cold Box Line Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the Warm Box Line Mixers and hopper, and the core and mold sand hopper. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (f) To document compliance with Condition D.7.11 2- Scrubber Parametric Monitoring, the Permittee shall maintain the daily records of the pH, pressure drop and flow rate reading across the scrubber. The Permittee shall include in its daily record when the pH, pressure drop and flow rate reading are not taken and the reason for the lack of pH, pressure drop and flow rate readings, (e.g. the process did not operate that day).

~~D.7.14 5~~ Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1(b), D.7.3, and D.7.4 and ~~D.7.5 including supporting calculations and data used for determining compliance with the HAP emission limits in condition D.7.3~~, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end

of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
 The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 36: All the Quarterly report form for the HAPs limits have been deleted from the permit and a new compliance reporting forms have been added to the permit.

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

Part 70 Quarterly Report

Source Name: ~~_____ Weil McLain, A United Dominion Company _____~~
 Source Address: ~~_____ 500 Blaine Street, Michigan City, Indiana 46360 _____~~
 Mailing Address: ~~_____ 500 Blaine Street, Michigan City, IN 46360 _____~~
 Part 70 Permit No.: ~~_____ T091-24543-00020 _____~~
 Facility: ~~_____ Four (4) Electric induction furnaces _____~~
 Parameter: ~~_____ Lead, manganese and Total HAP Emissions _____~~
 Limit: ~~(a) _____ Emissions of lead from the four (4) electric induction furnaces shall be less than 2.32 tons per twelve (12) consecutive month period _____~~
~~(b) _____ Emissions of manganese from the four (4) electric induction furnaces shall be less than 0.66 ton per twelve (12) consecutive month period _____~~
~~(c) _____ Emission of any combination of HAPs from the four (4) electric induction furnaces shall be less than 2.43 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; _____~~

~~Compliance with the above limits shall be determined using the equations in condition D.1.7(a), (c), and (e). Please attach supporting calculations and data used for determining HAP emissions reported.~~

QUARTER:

YEAR:

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c
	Lead Emissions This Month (tons)	Manganese Emissions This Month (tons)	Total HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total HAP Emissions Previous 11 Months (tons)
Month 1						
Month 2						
Month 3						

~~This Part 70 Operating Permit Quarterly Report consists of 2 pages.~~

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Lead Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Lead Emissions (tons)	Previous 11 Months Lead Emissions (tons)	12 Month Total Lead Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Manganese Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Manganese Emissions (tons)	Previous 11 Months manganese Emissions (tons)	12 Month Total Manganese Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Benzene Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Benzene Emissions (tons)	Previous 11 Months Benzene Emissions (tons)	12 Month Total Benzene Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Phenol Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Phenol Emissions (tons)	Previous 11 Months Phenol Emissions (tons)	12 Month Total Phenol Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Xylene Limit
Limit: Less than 10 tons per year for any single HAP per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Xylene Emissions (tons)	Previous 11 Months Xylene Emissions (tons)	12 Month Total Xylene Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: Entire Source
Parameter: Total HAPs Limit
Limit: Less than 25 tons per year for total HAPs per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month Total Emissions (tons)	Previous 11 Months Total Emissions (tons)	12 Month Total Emissions (tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Technical Support Document (TSD) for a Part 70 **Significant Permit Modification.**

Source Description and Location

Source Name:	Weil - McLain, A United Dominion Company
Source Location:	500 Blaine Street, Michigan City, IN 46360
County:	LaPorte
SIC Code:	3321
Operation Permit No.:	T 091-24543-00020
Operation Permit Issuance Date:	Yet to be issued
Significant Permit Modification No.:	091-27013-00020
Permit Reviewer:	Josiah Balogun

Existing Approvals

The source was issued Part 70 Operating Permit No. T091-6295-00020 on December 30, 2002. The source has since received the following approvals:

- (a) Significant Permit Modification 091-20949-00020, issued on April 19, 2007;
- (b) Administrative Amendment 091-24327-00020, issued on June 11, 2007; and
- (c) Significant Permit Modification 091-26372-00020, issued on June 17, 2008.

County Attainment Status

The source is located in Laporte County

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective July 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable or attainment effective November 15, 1990, for the 1-hour standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

- (a) Ozone Standards
 - (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
 - (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a

temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.

- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
 - (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Laporte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM2.5**
 Laporte County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.
 - (c) **Other Criteria Pollutants**
 Laporte 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.
 - (d) **Fugitive Emissions**
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

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

Pollutant	Emissions (tons/year)
PM	> 100
PM10	> 100
SO ₂	< 100
VOC	> 100
CO	> 100
NO _x	< 100

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) These emissions are based upon Part 70 Operating Permit Renewal No. 091-24543-00020, yet to be issued.

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

HAPs	Potential To Emit (tons/year)
Single HAP	less than 10
Total HAPs	less than 25

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, 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).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Weil-McClain on September 24, 2008, relating to conversion of the existing Warm Box Core Making Process to a Phenolic Urethane Cold Making process. The following is a list of the existing and new emission units and pollution control device which are being converted to use Phenolic Urethane resin and catalyst. No physical modifications of the existing units are proposed in this modification:

Weil McClain intends to convert Warm Box Core Making Process to a Phenolic Urethane cold box Making Process

- (a) One (1) Cold Box making operation, identified as CB-2, consisting of the following:
- (1) two (2) mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7 and exhausting through one (1) stack, identified as 36-1-DC-7;
 - (2) three (3) Cold Box core machines identified as Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, with an acid scrubber to control the catalyst emissions and exhausting inside the building; and
 - (3) one (1) 10 ton capacity line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by one (1) baghouse, identified as 36-1-DC-7, and exhausting through one (1) stack, identified as 36-1-DC-7.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational

design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-12. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	-
PM10	-
SO ₂	-
VOC	> 40
CO	-
NO _x	-

HAPs	Potential To Emit (tons/year)
Single HAP	less than 10
Total HAPs	less than 25

This Permit modification will be incorporated into the Part 70 Operation Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because this permit modification requires a case- by-case determination of emission limits.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/Emission Unit	PM (tons/yr)	PM10 (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)
Phenolic Urethane Core Making Operation						
Phenolic Urethane Resin	--	--	--	32	--	--
Phenolic Urethane Catalyst	--	--	--		--	--
Core Box Cleaner	--	--	--	5.0	--	--
Release Agent (Nix Stix)	--	--	--	0.9	--	--
Core Wash (Refcohol)				1.7		
Total for Modification	--	--	--	39.6	--	--
Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions

increase is less than the PSD significant level. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply to this application.

Federal Rule Applicability Determination

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.
- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
 - (1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The emission units have the potential to emit of regulated pollutants (uncontrolled) less than the major source thresholds.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the modified 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)

The Phenolic urethane Core making operation, identified as core machines #1, #2 and #3 have uncontrolled VOC emissions greater than 40 tons per year. The VOC emissions shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 (core machines #1, #2 and #3) shall not exceed 32 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = [(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{E2} / 100)] / 2000 \text{ lbs/ton}$$

Where:

Ef1 = 1 pounds per ton of core sand;

E2 = VOC control efficiency in % from the scrubber determined by the most recent IDEM approved stack test.

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the phenolic urethane core making

operation to less than 40 tons per year and render 326 IAC 2-2 (PSD) not applicable to the CB-2 isocure cold box core making process.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the Phenolic Urethane Core Making operation 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, the requirements of 326 IAC 2-4.1 is not applicable to the emission unit.

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

The CB-2 core machine #3 has uncontrolled VOC emissions greater than 25 tons per year. The VOC emissions shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 core machine #3 shall not exceed 20.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = \frac{[(\text{Core sand usage in tons} \times E_{f1}) + (\text{DMIPA usage in tons} \times E_2/100)]}{2000 \text{ lbs/ton}}$$

Where:

E_{f1} = 1 pounds per ton of core sand;

E_2 = VOC control efficiency in % from the scrubber determined by the most recent IDEM approved stack test

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the CB-2 cold box core machine #3 to less than 25 tons per year and render 326 IAC 8-1-6 (New Facilities, General Reduction requirements) not applicable to the CB-2 cold box core machine #3.

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 source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Scrubber for Unit #1	Flow Rate	Daily	specified by the manufacturer (gallons/min)	Response Steps
	Pressure Drop		specified by the manufacturer (inches)	
	pH		4.5	

Test Requirements

(a) VOC Testing

Emission units	Control device	When to test	Pollutants	Frequency of testing
CB-2 core machines #1, #2 and #3	Scrubber	180 days after startup	VOC	Every 5 years

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 091-24543-00020. Deleted language appears as ~~strike throughs~~ and new language appears in **bold**:

Change 1 Weil McLain will convert the Warm Box Core Making Operation in Section A.2 under Section D.7 to Phenolic Urethane Cold Box Making process at a later date (after the construction of the Phenolic Urethane).

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:

- (q) one (1) Warm Box core making operation consisting of the following:
 - (1) two (2) Warm Box mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;
 - (2) three (3) Warm Box core machines identified as Warm Box Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, and exhausting inside the building; and
 - (3) one (1) 10 ton capacity Warm Box line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7.

Weil McLain intends to convert Warm Box Core Making Process to a Phenolic Urethane cold box Making Process

- (a) **One (1) Cold Box making operation, identified as CB-2, consisting of the following:**
- (1) **two (2) mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7 and exhausting through one (1) stack, identified as 36-1-DC-7;**
 - (2) **three (3) Cold Box core machines identified as Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, with an acid scrubber to control the catalyst emissions and exhausting inside the building; and**
 - (3) **one (1) 10 ton capacity line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by one (1) baghouse, identified as 36-1-DC-7, and exhausting through one (1) stack, identified as 36-1-DC-7.**

Change 2 Phenolic Urethane Cold making process has been added to Section D.7 and the Warm box core making operation will be deleted from the section at a later date after the construction of the Phenolic Urethane cold making process. New conditions have been added to the permit. All other conditions have been revised accordingly. Subsequent conditions have been revised accordingly.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

-
- (q) **one (1) Warm Box core making operation consisting of the following:**
- (1) **two (2) Warm Box mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and 1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7;**
 - (2) **three (3) Warm Box core machines identified as Warm Box Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, and exhausting inside the building;**
 - (3) **one (1) 10 ton capacity Warm Box line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by a baghouse, identified as 36-1-DC-7, and exhausting through stack 36-1-DC-7.**

Weil McLain intends to convert Warm Box Core Making Process to a Phenolic Urethane cold box Making Process after the conversion, the process will be described as follows

- (q) **One (1) Cold Box making operation, identified as CB-2, consisting of the following:**
- (1) **two (2) mixers, identified as Mixer 1 and Mixer 2, constructed in 1971 and**

1981, respectively, each with a maximum throughputs of 3.5 and 1.5 tons of sand per hour, respectively, both controlled by a baghouse, identified as 36-1-DC-7 and exhausting through one (1) stack, identified as 36-1-DC-7;

(2) three (3) Cold Box core machines identified as Core Machines #1, #2, and #3, constructed in 1971, 1976, and 1981, respectively, each with a maximum throughput of 1.73 tons per hour of sand, with an acid scrubber to control the catalyst emissions and exhausting inside the building; and

(3) one (1) 10 ton capacity line sand hopper, constructed in 1971, with a maximum sand throughput of 5.0 tons of sand per hour, controlled by one (1) baghouse, identified as 36-1-DC-7, and exhausting through one (1) stack, identified as 36-1-DC-7.

.....

(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.7.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

.....

Emission Unit ID	Process Weight (tons/hr)	Allowable Particulate Emissions (lbs/hr)
Cold Box Sand Mixer	5.80	13.31
Cold Box line sand hopper	5.80	13.3
No Bake Sand Mixer	6.0	13.6
No Bake Line Handling	6.00	13.62
Warm Box Mixer 1	3.5	9.49
Warm Box Mixer 2	1.5	5.38
Warm Box Line Sand Hopper	5.00	12.05

(b) For purposes of demonstrating compliance with the particulate emission limits pursuant to 326 IAC 6-3-2 for the Cold box core making and sand handling, the No Bake core making, the ~~Warm Box line sand handling~~ **Sand Hopper**, and the B-Line Shakeout and the B-Line Muller & Sand Handling (including the B-Line Holding Silo) listed in section D.3, all of which are controlled by the baghouse identified as 36-1-DC-7, the allowable particulate emission rate from the baghouse identified as 36-1-DC-7 shall be limited to 142.77 pounds per hour.

D.7.3 HAP Minor Limit

.....

The requirements in paragraphs (c), (d) and (e) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.

D.7.4 PSD Minor Limits [326 IAC 2-2]

.....

The VOC emissions from the Phenolic urethane Core making operation, identified as core machines #1, #2 and #3 shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 (core machines #1, #2 and #3) shall not exceed 32 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = \frac{[(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{E2}/100)]}{2000 \text{ lbs/ton}}$$

Where:

Ef1 = 1.0 pounds per ton of core sand;

E2 = VOC control efficiency in % from the scrubber determined by the most recent IDEM approved stack test.

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the phenolic urethane core making operation to less than 40 tons per year and render 326 IAC 2-2 (PSD) not applicable to the CB-2 isocure cold box core making process.

D.7.5 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The VOC emissions from the CB-2 core machine #3 shall be limited as follows:

The VOC emissions from the phenolic urethane core making operation, identified as CB-2 core machine #3 shall not exceed 20.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC emissions shall be determined from the following equation:

$$\text{VOC emission in tons per month} = \frac{[(\text{Core sand usage in tons} \times \text{Ef1}) + (\text{DMIPA usage in tons} \times \text{E2}/100)]}{2000 \text{ lbs/ton}}$$

Where:

Ef1 = 1.0 pounds per ton of core sand;

E2 = VOC control efficiency in % from the scrubber determined by the most recent IDEM approved stack test

Compliance with these limits, combined with potential VOC emissions from the core box cleaner, release agent and core wash will limit the VOC emissions from the CB-2 cold box core machine #3 to less than 25 tons per year and render 326 IAC 8-1-6 (New Facilities, General Reduction requirements) not applicable to the CB-2 cold box core machine #3.

D.7.46 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

D.7.57 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

- (c) Within one hundred and eighty (180) days after the startup of the core machines, identified as #1, #2 and #3, in order to determine compliance with Condition D.7.4 and D7.5, the Permittee shall perform VOC control efficiency testing on the scrubber controlling the CB-2 cold box core machines #1, #2 and #3, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.**

D.7.68 Particulate Matter (PM) Control Equipment

- (a) In order to comply with Conditions D.7.1(a) and D.7.2, the baghouse for PM control shall be in operation at all times when the Cold Box Sand Mixer, the Cold Box line sand**

hopper, the No Bake line sand hopper, the ~~Warm Box~~ line sand hopper, and the ~~Warm Box~~ Sand Mixers, at all times that the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the ~~Warm Box~~ line sand hopper, and the ~~Warm Box~~ Sand Mixers are in operation.

-
- (d) In order to comply with Condition D.7.4, the scrubber for DMIPA control shall be in operation and control emissions from the cold box core machines, identified as #1,

#2 and #3

D.7.79 HAP Calculations

Compliance with the HAP limits in condition D.7.3 shall be demonstrated using the following equations:

.....

The requirements in paragraphs (c), (d) and (e) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.

.....

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

D.7.810 Visible Emissions Notations

- (a) Visible emission notations of the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the ~~Warm Box~~ line **CB-2 Mixers** sand and hopper, and the ~~Warm Box~~ Sand Mixers stack exhaust (stack 36-1-DC-7) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
-

D.7.911 Parametric Monitoring

The Permittee shall record the pressure drop across the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the ~~Warm Box~~ **Cold Box** line sand hopper, and the ~~Warm Box~~ Sand Mixers baghouse used in conjunction with the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the ~~Warm Box~~ line sand hopper, and the ~~Warm Box~~ Sand Mixers at least once per day when the Cold Box Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the ~~Warm Box~~ line sand hopper, and the ~~Warm Box~~ Sand Mixers are in operation. When for any one reading, the pressure drop across the baghouse are outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances . A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered deviation from the permit.

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

D.7.12 Scrubber Parametric Monitoring

- (a) The Permittee shall record the pressure drop, flow rate, and pH of the Scrubber controlling the **CB-2 cold box core machines #1, #2 and #3** at least once per day when the **CB-2 cold box core machines #1, #2 and #3** are in operation.
- (1) When for any one reading, the pressure drop across Scrubber is below a minimum specified by the manufacturer or a minimum pressure drop established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.

- (2) **When for any one reading, the flow rate across Scrubber is below a minimum specified by the manufacturer or a minimum flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.**
- (3) **When for any one reading, the pH across Scrubber is below a minimum of 4.5 or a minimum pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.**

A pressure drop, flow rate, or pH reading that is below the above mentioned minimums is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.7.4013 Broken or Failed Bag Detection

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

D.7.4414 Record Keeping Requirement

- (a) To document compliance with Condition D.7.1(b), the Permittee shall maintain records of the resin and catalyst usage for the No Bake core machine for each month.
- (b) To document compliance with Condition D.7.1(c), The Permittee shall maintain records of the resin and catalyst usage for the No Bake core machine for each month.
- (c) To document compliance with Condition D.7.3, the Permittee shall maintain records of the following:
 - (1) pounds of combined catalyst and combined resin usage for the Warm Box core machines for each month;
 - (2) Organic HAP stack test results for the No Bake core making operation;
 - (3) Organic HAP emission calculations performed using the equations in condition D.7.7; and
 - (4) Organic HAP emissions in tons per year.

The requirements in paragraphs (c)(1) of this condition shall no longer apply after the warm box core making process is converted to a Phenolic Urethane cold box process.

- (d) To document compliance with Condition D.7.8 **10 - Visible Emission Notation**, the Permittee shall maintain daily records of visible emission notations of the for the baghouse controlling the Cold Box Line Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the ~~Warm Box Line~~ **CB-2** Mixers and hopper, and the core and mold sand hopper stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

- (e) To document compliance with Condition D.7.9 **11 - Parametric Monitoring**, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the Cold Box Line Sand Mixer, the Cold Box line sand hopper, the No Bake line sand hopper, the Warm Box Line Mixers and hopper, and the core and mold sand hopper. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (f) **To document compliance with Condition D.7.12– Scrubber Parametric Monitoring, the Permittee shall maintain the daily records of the pH, pressure drop and flow rate reading across the scrubber. The Permittee shall include in its daily record when the pH, pressure drop and flow rate reading are not taken and the reason for the lack of pH, pressure drop and flow rate readings, (e.g. the process did not operate that day).**
- (f g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.1215 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1(b) and D.7.3, **D.7.4 and D.7.5** including supporting calculations and data used for determining compliance with the HAP emission limits in condition D.7.3, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 5 Quarterly report forms have been added to the permit to demonstrate compliance with Conditions D.7.4 and D.7.5

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, IN 46360
Part 70 Permit No.: T091-24543-00020
Facility: CB-2 Core machines (#1, #2 and #3)
Parameter: VOC emissions
Limit: less than 32 tons per twelve (12) consecutive month period with compliance determined at the end of each month period.

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (tons)	Previous 11 Months (tons)	12 Month Total (tons)

Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Weil-McLain, A United Dominion Company
 Source Address: 500 Blaine Street, Michigan City, Indiana 46360
 Mailing Address: 500 Blaine Street, Michigan City, IN 46360
 Part 70 Permit No.: T091-24543-00020
 Facility: CB-2 Core machine, identified as core machine #3
 Parameter: VOC emissions
 Limit: less than 20.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month period.

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (tons)	Previous 11 Months (tons)	12 Month Total (tons)
Month 1			

Month 2			
Month 3			

No deviation occurred in this quarter.

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Conclusion and Recommendation

This source shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 091-27013-00020. The staff recommends to the Commissioner that this Part 70 Significant Permit Modification be approved.

Appendix A: Emissions Calculations

Emission Summary

Source Name: Weil McLain

Source Location: 500 Blaine Street, Michigan City, IN 46360

Permit Number: SPM091-27013-00020

Permit Reviewer: Josiah Balogun

Date: 15-Oct-2008

Uncontrolled Potential Emissions

	PM (tons/yr)	PM₁₀ (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)
Emission Unit							
Phenolic Urethane Core Making Operation							
Phenolic Urethane Resin	0	0	0		0	0	
Phenolic Urethane Catalyst	0	0	0		0	0	
Core Box Cleaner	0	0	0		0	0	
Release Agent (Nix Stix)	0	0	0	greater than 40	0	0	Single less than 10 Total less than 25
Core Wash (Refcohol)	0	0	0		0	0	
Total Emissions	0	0	0	> 40	0	0	Single less than 10 Total less than 25

Appendix A: Emissions Calculations

Emission Summary

Source Name: Weil McLain

Source Location: 500 Blaine Street, Michigan City, IN 46360

Permit Number: SPM091-27013-00020

Permit Reviewer: Josiah Balogun

Date: 15-Oct-2008

Limited Potential Emissions

	PM (tons/yr)	PM₁₀ (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)
Emission Unit							
Phenolic Urethane Core Making Operation							Single less than 10 Total less than 25
Phenolic Urethane Resin	0	0	0	28.1	0	0	
Phenolic Urethane Catalyst	0	0	0	3.9	0	0	
Core Box Cleaner	0	0	0	5	0	0	
Release Agent (Nix Stix)	0	0	0	0.9	0	0	
Core Wash (Refcohol)	0	0	0	1.7	0	0	
Total Emissions	0	0	0	39.6	0	0.0	Single less than 10 Total less than 25

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: SPM091-27013-00020
Permit Reviewer: Josiah Balogun
Date: #####

VOC Emissions

Emission Unit	Maximum Capacity per machine (tons/hr)	Throughput Limit for core machine #3 (tons/yr)	Throughput Limit for all 3 core machines combined (tons/yr)	Pollutant	Emission Factor (lb/ton)	Source of Emission Factor	Overall Control Efficiency %	Limited VOC Emissions Before Controls for Core Machine #3 (tpy)	Limited VOC Emissions Before Controls for all 3 Core Machines Combined (tpy)	Limited VOC Emissions After Controls for all 3 Core Machines (tpy)
Phenolic Urethane Core Making Operation										
Core Sand	1.73	10,600	56,200							
Phenolic Urethane Resin (1% by weight)	0.0173	106.0	562.0	VOC	1.0	MSDS	0%	5.3	28.1	28.1
Phenolic Urethane Catalyst (DMIPA) (2.8 lbs/ton sand)	4.8440	29,680	157,360	VOC	100%	MSDS	95%	14.8	78.7	3.9
Core Box Cleaner	0.00100	3.0	5.0	VOC	100%	MSDS	0%	3.0	5.0	5.0
Release Agent (NixStix)	0.00055	0.5	1.0	VOC	90%	MSDS	0%	0.5	0.9	0.9
Core Wash (Refcohol)		2.0	4.0	VOC	43%	MSDS	0%	0.9	1.7	1.7
Total Emissions (tons/year)								24.5	114.4	39.7

Maximum capacities for the core box cleaner, release agent and core wash are based on worst-case material to sand usage ratios.
 An acid scrubber will be used to control the DMIPA emissions.

	Maximum Capacity	Weight % VOC	VOC Emissions
	lb/hr	%	(tons/yr)
Warm Box mixer #1 & core machine #1			
resin	55.4	0%	0
catalyst	9.9	47.29%	21
Warm Box mixer #2 & core machine #2			
resin	55.4	0%	0
catalyst	9.9	47.29%	21
Warm Box mixer #3 & core machine #3			
resin	55.4	0%	0
catalyst	9.9	47.29%	21
Total Emissions (tons/year)			62

Note: Although the resin used in the warm box core making contains formaldehyde, the formaldehyde reacts under acidic conditions and forms new products that are not VOCs or HAPs; therefore no VOC is released to the atmosphere from the warm box resin usage.

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: SPM091-27013-00020
Permit Reviewer: Josiah Balogun
Date: 15-Oct-2008

HAPs Emissions

Potential Emissions Before Controls										
Emission Unit	Limited Usage (tons/yr)	Pollutant	Weight % Emission Factor %	Source of Emission Factor	Control Efficiency %	Phenol (Tons/Year)	MDI (Tons/Year)	Formaldehyde (Tons/Year)	Naphthalene (Tons/Year)	Total (Tons/Year)
Phenolic Urethane Core Making Operation - Resin Usage										
- Part I Resin	281.0 (tons/year)	Phenol	5.0%	MSDS	0%	0.00	0.00	0.06	0.09	
		MDI	0.0%	MSDS	0%					
		Formaldehyde	1.0%	MSDS	0%					
		Naphthalene	1.0%	MSDS	0%					
- Part II Resin	281.0 (tons/year)	Phenol	0.0%	MSDS	0%	0.00	0.00	0.00	0.09	
		MDI	50.0%	MSDS	0%					
		Formaldehyde	0.0%	MSDS	0%					
		Naphthalene	1.0%	MSDS	0%					
Total Emissions (tons/year)						0.0000	0.0000	0.0562	0.1827	0.2389

Notes:

1. The following Reduction Factors for Phenolic Urethane Core Making were obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries

Pollutant	% Released of Part I Resin	% Released of Part II Resin
Phenol	0.00%	NA
MDI	NA	0.00%
Formaldehyde	2.00%	NA
Naphthalene	3.25%	3.25%

2. HAP Emissions from resins = (Maximum Capacity)*(Weight % Emission Factor)*(Reduction Factor)