INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: November 24, 2008

RE: Weil-Mclain, A United Dominion Company / 091-24543-00020

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

Notice of Decision: Approval – Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

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

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

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

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

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

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

Enclosures
FNTVOP.dot12/3/07

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

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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: *Original Signed By:* Tripurari P. Sinha, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: November 24, 2008 Expiration Date: November 24, 2013

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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 1977and modified in 1991, processing a maximum of 20 tons of metal per hour, exhausting inside the building;

(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.

(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 PM_{10} 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 SO_2 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(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

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

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

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

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

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

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

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

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

(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.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 PM_{10} 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 PM_{10} 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 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.

D.1.4 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.1.5 Testing Requirements [326 IAC 2-7-6(1)][326 IAC 2-1.1-11]

(a) In order to determine compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM_{10} 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.

(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.

D.1.6 Particulate Matter (PM)

(a) Inorder to comply with Conditions D.1.1, D.1.2 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.

(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 inclued 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.1.7 HAP Calculations

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

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

Where:

EF_{FPb} = 0.00016992 pound lead 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)

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

Where:
EF_{CHPb} = 0.00231 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 charge handling operation (tons per twelve (12) consecutive month period)

(c) Manganese Emissions from the four (4) electric induction furnaces (tons/yr) = EF_{FMn} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 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/yr) = 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/yr) = 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/yr) = 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.

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

D.1.8 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.1.9 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.1.10 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.1.11 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.1.8, 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, 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.1.3, the Permittee shall maintain records of the following:

(1) HAP stack test results for one (1) of the four (4) electric induction furnaces;

(2) HAP emission calculations performed using the equations in condition D.1.7; and

(3) HAP emissions in tons per year.

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

D.1.12 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).

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 Handing (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 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.

D.2.5 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.2.6 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 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. 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.

D.2.7 Particulate Matter (PM)

(a) Inorder to comply with Conditions D.2.1, D.2.2 and D.2.3, the baghouse for PM and metallic 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 inclued 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.2.8 HAP Calculations

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

(1) Lead Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/yr) = [EF_{APPb} (lb/ton) x M_{AP} (tons per twelve (12) consecutive month period)] + [EF_{ACPb} (lb/ton) x M_{AC} (tons per twelve (12) consecutive month period)] + [EF_{ASPb} (lb/ton) x M_{AS} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 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/yr) = [EF_{APMn} (lb/ton) x M_{AP} (tons per twelve (12) consecutive month period)] + [EF_{ACMn} (lb/ton) x M_{AC} (tons per twelve (12) consecutive month period)] + [EF_{ASMn} (lb/ton) x M_{AS} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 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/yr) = [EF_{APTM} (lb/ton) x M_{AP} (tons per twelve (12) consecutive month period)] + [EF_{ACTM} (lb/ton) x M_{AC} (tons per twelve (12) consecutive month period)] + [EF_{ASTM} (lb/ton) x M_{AS} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 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 shall be determined using the following equations:

(1) Phenol Emissions from the A-Line Pouring, Cooling, and Shakeout operations (tons/yr) = [EF_{APh} (lb/lb) x R_{CBA} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)] + 0.131 ton per year 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/yr) = [EF_{AB} (lb/lb) x R_{CBA} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)] + 0.611 ton per 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/yr) = [EF_{ATO} (lb/lb) x R_{CBA} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)] + 1.076 tons per 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_{APPb}, EF_{ACPb}, EF_{ASPb}, EF_{APMn}, EF_{ACMn}, EF_{ASMn}, EF_{APTM}, EF_{ACTM}, and EF_{ASTM}.

(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_{APh}, EF_{AB} and EF_{ATO}.

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

D.2.9 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.2.10 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.2.11 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated

continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.

(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.2.12 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.2.9, 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.2.10, 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, 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;

(3) Metallic HAP emission calculations performed using the equations in condition D.2.8(a); and

(4) Metallic HAP emissions in tons per year.

(e) To document compliance with Condition D.2.4, 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;

(3) Organic HAP emission calculations performed using the equations in condition D.2.8(b); and

(4) Organic HAP emissions in tons per year.

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

D.2.13 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).

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 PM_{10} 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 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 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.

D.3.6 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.3.7 Particulate Matter (PM)

(a) Inorder 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 Holdding Silo and Muller are in operation.

(b) Inorder to comply with Condition 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.

(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 inclued the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.8 HAP Calculations

(a) Metal HAP Emissions for condition D.3.4 shall be determined using the following equations:

(1) Lead Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/yr) = [EF_{BPPb} (lb/ton) x M_{BP} (tons per twelve (12) consecutive month period)] + [EF_{BCPb} (lb/ton) x M_{BC} (tons per twelve (12) consecutive month period)] + [EF_{BSPb} (lb/ton) x M_{BS} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 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/yr) = [EF_{BPMn} (lb/ton) x M_{BP} (tons per twelve (12) consecutive month period)] + [EF_{BCMn} (lb/ton) x M_{BC} (tons per twelve (12) consecutive month period)] + [EF_{BSMn} (lb/ton) x M_{BS} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{BPMn} = 0.1302 pound manganese 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_{BCMn} = 0.0434 pound manganese 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_{BSMn} = 0.0206 pound manganese 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)

(3) Total Metal HAP Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/yr) = [EF_{BPTM} (lb/ton) x M_{BP} (tons per twelve (12) consecutive month period)] + [EF_{BCTM} (lb/ton) x M_{BC} (tons per twelve (12) consecutive month period)] + [EF_{BSTM} (lb/ton) x M_{BS} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{BPTM} = 0.1591 pound combined metal HAP 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_{BCTM} = 0.053 pound combined metal HAP 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_{BSTM} = 0.0252 pound combined metal HAP 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)

(b) Organic HAP Emissions for condition D.3.5 shall be demonstrated using the following equations:

(1) Phenol Emissions from the B-Line Pouring, Cooling, and Shakeout operations (tons/yr) = [EF_{BPh} (lb/lb) x R_{CBB} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)] + 0.043 ton per 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/yr) = [EF_{BB} (lb/lb) x R_{CBB} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)] + 0.199 ton per 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/yr) = [EF_{BTO} (lb/lb) x R_{CBB} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)] + 0.35 ton per 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_{BPPb}, EF_{BCPb}, EF_{BSPb}, EF_{BPMn}, EF_{BCMn}, EF_{BSMn}, EF_{BPTM}, EF_{BCTM}, and EF_{BSTM}.

(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_{BPh}, EF_{BB} and EF_{BTO}.

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

D.3.9 Visible Emissions Notations

(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.3.10 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.3.11 Broken or Failed Bag Detection

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

(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.3.12 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.3.9, 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.3.10, 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, 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;

(3) Metallic HAP emission calculations performed using the equations in condition D.3.8(a); and

(4) Metallic HAP emissions in tons per year.

(e) To document compliance with Condition D.3.5, 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;

(3) Organic HAP emission calculations performed using the equations in condition D.3.8(b); and

(4) Organic HAP emissions in tons per year.

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

D.3.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.1(a) 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).

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 PM_{10} 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 PM_{10} 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 PM_{10} 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 reclaimer, 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 Limitaions 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 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.

D.4.6 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.4.7 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 PM_{10} testing 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.

D.4.8 Particulate Matter (PM)

(a) Inorder 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) Inorder to comply with Condition 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

(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 inclued the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.4.9 HAP Calculations

(a) Metal HAP Emissions for condition D.4.4 shall be determined using the following equations:

(1) Lead Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/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/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_{FSMn} (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/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/yr) = EF_{WPb} (lb/ton) x M_W (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{WPb} = 0.00137 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_W = total metal throughput to the Wheelabrator shot blast machine (tons per twelve (12) consecutive month period)

(5) Manganese Emissions from the Wheelabrator shot blast machine (tons/yr) = EF_{WMn} (lb/ton) x M_W (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{WMn} = 0.0111 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_W = total metal throughput to the Wheelabrator shot blast machine (tons per twelve (12) consecutive month period)

(6) Total Metal HAP Emissions from the Wheelabrator shot blast machine (tons/yr) = EF_{WTM} (lb/ton) x M_W (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{WTM} = 0.0135 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_W = total metal throughput to the Wheelabrator shot blast machine (tons per twelve (12) consecutive month period)

(b) Organic HAP Emissions for condition D.4.5 shall be determined using the following equations:

(1) Phenol Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/yr) = EF_{FPh} (lb/lb) x R_{NB} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FPh} = 0.0039 pound phenol 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)

(2) Benzene Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/yr) = EF_{FB} (lb/lb) x R_{NB} (pounds per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FB} = 0.00535 pound benzene 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)

(3) Total Organic HAP Emissions from the Floor Pouring, Cooling, Shakeout, and Knockout operations (tons/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/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_{FPPb}, EF_{FCPb}, EF_{FSPb}, EF_{FKPb}, EF_{FPMn}, EF_{FCMn}, EF_{FSMn}, EF_{FKMn}, 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_{WPb}, EF_{WMn}, 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}.

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

D.4.10 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.4.11 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.4.12 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.4.13 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.4.10, 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, 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, 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) HAP stack test results for the Floor Pouring, Cooling, Shakeout, and Knockout operations or the Wheelabrator shot blast machine as applicable;

(4) Metallic HAP emission calculations performed using the equations in condition D.4.9(a); and

(5) Metallic HAP emissions in tons per year.

(h) To document compliance with Condition D.4.5, 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 stack test results for the High Speed Continuous Sand Mixer;

(3) Organic HAP emission calculations performed using the equations in condition D.4.9(b); and

(4) Organic HAP emissions in tons per year.

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

D.4.14 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), D.4.3(c), 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).

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 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.5.3 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.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.

D.5.5 Particulate Matter (PM)

(a) Inorder to comply with Conditions D.5.1 and D.5.2, the baghouse for PM and metallic 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 inclued the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.5.6 HAP Calculations

Compliance with the HAP limits in condition D.5.2 shall be demonstrated using the following equations:

(a) Lead Emissions from the Chill Iron shot blast machine (tons/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/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.

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

D.5.7 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.5.8 Broken or Failed Bag Detection

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

(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.5.9 Record Keeping Requirement

(a) To document compliance with Condition D.5.7, 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, 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;

(3) Metallic HAP emission calculations performed using the equations in condition D.5.6; and

(4) Metallic HAP emissions in tons per year.

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

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).

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 PM_{10} 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 PM_{10} 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 PM_{10} emissions from the High Speed Continuous Sand Mixer in section D.4 above, shall limit the total PM and PM_{10} 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 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.

D.6.4 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.6.5 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 PM_{10} testing by July 2008 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.

D.6.6 Particulate Matter (PM)

(a) Inorder 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) Inorder to comply with Condition D.6.3, 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 inclued 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.6.7 HAP Calculations

Emissions of HAP in condition D.6.3 shall be determined using the following equations:

(a) Lead Emissions from the scrap handling rotary reclaimer (tons/yr) = EF_{RRPb} (lb/ton) x M_{RR} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{RRPb} = 0.00014 pound lead 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)

(b) Manganese Emissions from the scrap handling rotary reclaimer (tons/yr) = EF_{RRMn} (lb/ton) x M_{RR} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{RRMn} = 0.0011 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/yr) = 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.

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

D.6.8 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.6.9 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.6.10 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.6.11 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.6.8, 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, 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, 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) Metallic HAP emission calculations performed using the equations in condition D.6.7; and

(4) Metallic HAP emissions in tons per year.

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

D.6.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(c), (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).

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.

(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 Emssion 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
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, 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

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 les 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 limits 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.

D.7.4 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.7.5 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 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.

D.7.6 Particulate Matter (PM)

(a) Inorder 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.

(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 inclued the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.7.7 HAP Calculations

Emissions of HAP limits in condition D.7.3 shall be determined using the following equations:

(a) Xylene Emissions from the No Bake core making operation (tons/yr) = [EF_{NBR1X} (lb/lb) x R_{CNB1} (pounds per twelve (12) consecutive month period)] + [EF_{NBCX} (lb/lb) x C_{CNB} (pounds per twelve (12) consecutive month period)] x (1 ton / 2000 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/yr) = [EF_{NBR1TO} (lb/lb) x R_{CNB1} (pounds per twelve (12) consecutive month period)] + [EF_{NBR2TO} (lb/lb) x R_{CNB2} (pounds per twelve (12) consecutive month period)] + [EF_{NBCTO} (lb/lb) x C_{CNB} (pounds per twelve (12) consecutive month period)] x (1 ton / 2000 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/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/yr) = 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/yr) = [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_{NBR1X}, EF_{NBR1TO}, and EF_{NBR2TO}.

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

D.7.8 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 sand 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.

(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.7.9 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 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.7.10 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.7.11 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.7.3, 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.

(c) To document compliance with Condition D.7.8, 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 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).

(d) To document compliance with Condition D.7.9, 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).

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

D.7.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1(b) and D.7.3, 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).

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 PM_{10} 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 0.551pounds 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.

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 PM_{10} 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: 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.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month total Lead Emissions (tons)	12 Month total Mn Emissions (tons)	12 Month total HAP 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: Charge handling
Parameter: Lead, Manganese and Total HAP Emissions
Limit:
(a) Emissions of lead from the charge handling system shall be less than 0.10 ton per twelve (12) consecutive month period
(b) Emissions of manganese from the charge handling system shall be less than 0.47 ton per twelve (12) consecutive month period
(c) Emissions of any combination of HAPs from the charge handling system shall be less than 0.57 ton per twelve (12) consecutive month period

Compliance with the above limits shall be determined using the equations in condition D.1.7(b), (d), and (f). 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.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total HAP 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: A-line pouring, Cooling and Shakeout operations
Parameter: Lead, Manganese and Total metal HAP Emissions
Limit:
(a) Total emissions of lead from the A-Line Pouring, Cooling, and Shakeout operations shall be less than 1.10 tons per twelve (12) consecutive month period
(b) Total emissions of manganese from the A-Line Pouring, Cooling, and Shakeout operations shall be less than 3.04 tons per twelve (12) consecutive month period
(c) Total emissions of any combination of metal HAPs from the A-Line Pouring, Cooling, and Shakeout operations shall be less than 3.71 tons per twelve (12) consecutive month period.

Compliance with the above limits shall be determined using the equations in condition D.2.8(a). 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 Metal HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total Metal HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1a + Column 2a	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total HAP 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: A-line pouring, Cooling and Shakeout operations
Parameter: Phenol, Benzene and Total organic HAP Emissions
Limit:
(a) 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 (listed in section D.3) combined shall be less than 1.85 tons per twelve (12) consecutive month period
(b) 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 (listed in section D.3) combined shall be less than 2.41 tons per twelve (12) consecutive month period
(c) 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 (listed in section D.3) combined shall be less than 2.41 tons per twelve (12) consecutive month period

Compliance with the above limits shall be determined using the equations in condition D.2.8(b) and D.3.8(b). 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
	Phenol Emissions This Month (tons)	Benzene Emissions This Month (tons)	Total Organic HAP Emissions This Month (tons)	Phenol Emissions Previous 11 Months (tons)	Benzene Emissions Previous 11 Months (tons)	Total Organic HAP Emissions Previous 11 Months (tons)
Month 1						
Month 2						
Month 3						

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Phenol Emissions (tons)	12 Month Total Benzene Emissions (tons)	12 Month Total Organic 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: B-Line Pouring, Cooling, and Shakeout operations
Parameter: Lead, manganese and total metal HAP emissions
Limit:
(a) Total emissions of lead from the B-Line Pouring, Cooling, and Shakeout operations shall be less than 0.65 ton per twelve (12) consecutive month period
(b) Total emissions of manganese from the B-Line Pouring, Cooling, and Shakeout operations shall be less than 1.36 ton per twelve (12) consecutive month period
(c) Total emissions of any combination of metal HAPs from the B-Line Pouring, Cooling, and Shakeout operations shall be less than 1.67 tons per twelve (12) consecutive month period

Compliance with the above limits shall be determined using the equations in condition D.3.8(a). 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 Metal HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total Metal HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1a + Column 2a	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total Metal HAP 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: Floor Pouring, Cooling, Shakeout, and Knockout operations
Parameter: Lead, manganese and total metal HAP emissions
Limit:
(a) 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
(b) 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
(c) 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

Compliance with the above limits shall be determined using the equations in condition D.4.9(a)(1) through (3). 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 Metal HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total Metal HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total Metal HAP 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: Floor Pouring, Cooling, Shakeout, and Knockout operations
Parameter: Phenol, benzene, and total organic HAP emissions
Limit:
(a) 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
(b) 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
(c) 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

Compliance with the above limits shall be determined using the equations in condition D.4.9(b)(1) through (3). 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
	Phenol Emissions This Month (tons)	Benzene Emissions This Month (tons)	Total Organic HAP Emissions This Month (tons)	Phenol Emissions Previous 11 Months (tons)	Benzene Emissions Previous 11 Months (tons)	Total Organic HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1a + Column 2a	Column 1c + Column 2c
	12 Month Total Phenol Emissions (tons)	12 Month Total Benzene Emissions (tons)	12 Month Total Organic HAP 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: Wheelabrator shot blast machine
Parameter: Lead, manganese and total metal HAP emissions
Limit:
(a) Emissions of lead from the Wheelabrator shot blast machine shall be less than 3.52 tons per twelve (12) consecutive month period
(b) Emissions of manganese from the Wheelabrator shot blast machine shall be less than 3.00 tons per twelve (12) consecutive month period
(c) 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

Compliance with the above limits shall be determined using the equations in condition D.4.9(a)(4) through (6). 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 Metal HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total Metal HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1a + Column 2a	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total Metal HAP 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: High Speed Continuous Sand Mixer
Parameter: Xylene and total organic HAP emissions
Limit: (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
(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

Compliance with the above limits shall be determined using the equations in condition D.4.9(b)(4) and (5). Please attach supporting calculations and data used for determining HAP emissions reported.

QUARTER: YEAR:

Month	Column 1a	Column 1b	Column 2a	Column 2b	Column 1a + Column 2a	Column 1b + Column 2b
	Xylene Emissions This Month (tons)	Total Organic HAP Emissions This Month (tons)	Xylene Emissions Previous 11 Months (tons)	Total Organic HAP Emissions Previous 11 Months (tons)	12 Month Total Xylene Emissions (tons)	12 Month Total Organic HAP 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: Chill Iron shot blast machine
Parameter: Lead, manganese and total metal HAP emissions
Limit:
(a) Emissions of lead from the Chill Iron shot blast machine shall be less than 0.20 ton per twelve (12) consecutive month period
(b) Emissions of manganese from the Chill Iron shot blast machine shall be less than 0.17 ton per twelve (12) consecutive month period
(c) 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

Compliance with the above limits shall be determined using the equations in condition D.5.5. 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 Metal HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total Metal HAP Emissions Previous 11 Months (tons)
Month 1						
Month 2						
Month 3						

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total Metal HAP 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: Scrap handling rotary reclaimer
Parameter: Lead, manganese and total metal HAP emissions
Limit:
(a) Emissions of lead from the scrap handling rotary reclaimer shall be less than 0.32 ton per twelve (12) consecutive month period
(b) Emissions of manganese from the scrap handling rotary reclaimer shall be less than 0.27 ton per twelve (12) consecutive month period
(c) 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

Compliance with the above limits shall be determined using the equations in condition D.6.7. 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 Metal HAP Emissions This Month (tons)	Lead Emissions Previous 11 Months (tons)	Manganese Emissions Previous 11 Months (tons)	Total Metal HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1a + Column 2a	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Mn Emissions (tons)	12 Month Total Metal HAP 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: No Bake core making operation
Parameter: Xylene and total HAP emissions
Limit: (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
(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

Compliance with the above limits shall be determined using the equations in condition D.7.7(a) and (b). Please attach supporting calculations and data used for determining HAP emissions reported.

QUARTER : YEAR:

Month	Column 1a	Column 1b	Column 2a	Column 2b	Column 1a + Column 2a	Column 1b + Column 2b
	Xylene Emissions This Month (tons)	Total HAP Emissions This Month (tons)	Xylene Emissions Previous 11 Months (tons)	Total HAP Emissions Previous 11 Months (tons)	12 Month Total Xylene Emissions (tons)	12 Month Total HAP 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: Warm Box core making operation
Parameter: Ethylene glycol, phenol, and total HAP emissions
Limit:
(a) 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
(b) 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
(c) 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

Compliance with the above limits shall be determined using the equations in condition D.7.7(c) through (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
	Ethylene glycol Emissions This Month (tons)	Phenol Emissions This Month (tons)	Total HAP Emissions This Month (tons)	Ethylene glycol Emissions Previous 11 Months (tons)	Phenol Emissions Previous 11 Months (tons)	Total HAP Emissions Previous 11 Months (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + column 2a	Column 1a + column 2a	Column 1c + Column 2c
	12 Month Total Ethylene Glycol Emissions (tons)	12 Month Total Phenol Emissions (tons)	12 Month Total Organic HAP 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".

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit (TITLE V)

Source Background and Description

Source Name:	Weil-McLain, A United Dominion Company
Source Location:	500 Blaine Street, Michigan City, IN 46360
County:	Laporte
SIC Code:	3321
Permit Renewal No.:	T091-24543-00020
Permit Reviewer:	Josiah Balogun

On October 4, 2008, the Office of Air Quality (OAQ) had a notice published in the News Dispatch, Michigan City, Indiana, stating that Weil-McLain, A United Dominion Company had applied for a Part 70 Operating Permit (TITLE V) to continue to operate a gray iron foundry. The notice also stated that OAQ proposed to issue a Title V for this operation and provided information on how the public could review the proposed Title V 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 Title V should be issued as proposed.

On November 2, 2008, Gary Connor of Weil-McLain, A United Dominion Company submitted comments on the proposed Title V Operating Permit. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

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.

The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Comment 1: Insert Compliance with source wide emissions of individual HAPs and any combination of HAPs shall be less than 10 tons and 25 tons respectfully. Exceedance of the limits cited in this section does not constitute non-compliance unless the facility wide thresholds (calculated by combining all emission units) are exceeded. For compliance determinations, the limits cited in this section are only to be used in combination with source wide limits. Emissions testing or other factors may dictate adjustments (higher or lower) of the limits where the permit has the following language:

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.

Weil-McLain cannot guarantee that these individual HAP limits in tons/year are precise and they will most certainly change when a new emission factor is substituted. A change

of plus or minus 0.10 tons for any single emission unit is not an unlawful act. Making it a compliance violation is unacceptable because the underlying rule is based on 10 and 25 tons. Unless this is made clear and communicated agency wide, especially to the Compliance Data Section, the present language is unacceptable. It places Weil-McLain at risk when the limits specified by the rule have not been violated.

Response 1: The above conditions are required for compliance with the HAPs limits of less than 10 tons per year of single HAP and less than 25 tons per year of combined HAPs. The HAP calculations methods in Conditions D.1.7, D.2.8, D.3.8, D.4.9, D.5.6, D.6.7 and D.7.7 allows for variations in emission factors due to periodic testing. Therefore, the Permittee will not be in violation of these individual limits if they are using the emission factors determined from the stack tests. Therefore, no changes are made to Conditions D.1.3, D.2.3, D.2.4, D.3.4, D.3.5, D.4.4, D.4.5, D.5.2, D.6.3 and D.7.3.

Comment 2: The language IDEM uses for Weil-McLain to adopt and use IDEM approved stack test results requires modification. The same issue applies (as comment 1). This factor alone is not a compliance issue and it should be communicated in this permit. If a new emission factor is from a test is substituted and used. Does the emission factor obtained in the test five years later that is 0.002 lb per ton higher constitute a permit violation? If not, that has to be communicated in this permit.

Response 2: It the emission factors determined after 5 years are different than the present emission factor, then the Permittee shall calculate emissions based on the new emission factors determined from the latest stack tests. This will not be a violation as it is allowed in the HAP calculation conditions in each D-Section.

Comment 3: Stack testing dates are inconsistent; some are specific dates, others are “within 180 days etc.) and some are already past. I have edited the dates accordingly and removed the dates of past and added five years to them.

Response 3: The stack testing dates have been updated throughout the permit.

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

(a) *************

(b) ~~Within nine (9) months after issuance of this Permit T091-24543-00020, in~~ **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** ~~and 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.

(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.

D.2.6 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~~ **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** ~~total organic HAP~~ **and phenol and benzene** testing **by October 2013, respectively,** on the A-Line Pouring, A-Line Cooling, and A-Line Shakeout operations ~~total metal HAP testing on the A-Line Pouring, A-Line Cooling, and A-Line Shakeout and any single HAP on 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.

(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.

Comment 4: Miscellaneous edits to errors.

Response 4: All typos in Conditions D.1.7, D.2.8, D.3.5, D.3.8 D.4.9, D.6.7 and D.7.9 have been corrected accordingly.

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:

.....

(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.1.7 HAP Calculations

~~Compliance with the~~ **Emissions of** HAP ~~limits~~ in condition D.1.3 shall be determined ~~demonstrated~~ using the following equations:

.....

D.2.8 HAP Calculations

(a) ~~Compliance with the~~ **Emissions of** metal HAP ~~limits~~ in condition D.2.3 shall be determined using the following equations:

.....

(b) ~~Compliance with the~~ **Emissions of** organic HAP ~~limits~~ in condition D.2.4 shall be **determined** ~~demonstrated~~ using the following equations:

.....

D.3.5 Organic HAP Minor Limit

.....

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

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

D.3.8 HAP Calculations

(a) ~~Compliance with the metal~~ **Metal** HAP **Emissions for** ~~limits~~ ~~in~~ condition D.3.4 shall be determined using the following equations:

.....

(b) ~~Compliance with the o~~ **O**rganic HAP **Emissions for** ~~limits~~ ~~in~~ condition D.3.5 shall be **determined** ~~demonstrated~~ using the following equations:

.....

D.4.9 HAP Calculations

(a) ~~Compliance with the m~~ **M**etal HAP **Emissions for** ~~limits in~~ condition D.4.4 shall be **determined** ~~demonstrated~~ using the following equations:

.....

(b) ~~Compliance with the o~~ **O**rganic HAP **Emissions for** ~~limits in~~ condition D.4.5 shall be **determined** ~~demonstrated~~ using the following equations:

.....

D.6.7 HAP Calculations

~~Compliance with the~~ **Emissions of** HAP ~~limits~~ in condition D.6.3 shall be **determined** ~~demonstrated~~ using the following equations:

.....

D.7.7 HAP Calculations

~~Compliance with the~~ **Emissions of** HAP ~~limits~~ in condition D.7.3 shall be **determined** ~~demonstrated~~ using the following equations:

.....

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Weil-McLain, A United Dominion Company
Source Location:	500 Blaine Street, Michigan City, IN 46360
County:	Laporte
SIC Code:	3321
Permit Renewal No.:	T091-24543-00020
Permit Reviewer:	Josiah Balogun

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Weil- McLain, A United Dominion Company relating to the operation of a gray iron foundry producing gray iron boilers.

History

On March 30, 2007, Weil-McLain, A United Dominion Company submitted applications to the OAQ requesting to renew its operating permit. Weil-McLain, A United Dominion Company was issued a Part 70 Operating Permit on December 30, 2002.

Permitted Emission Units and Pollution Control Equipment

(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, 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.

(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

(s) one (1) dip tank, identified as Dip Tank Painting, constructed in 1970, using a maximum of 5.8 pounds of coating per hour to coat metal parts, exhausting through stack 3-E-1.

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

There are no unpermited emission units operating at this source during this review process.

Emission Units and Pollution Control Equipment Removed From the Source

(a) one (1) assembled boiler rating and certification operation, with a maximum boiler heat input rating of 7.216 million British thermal units (MMBtu) per hour, combusting natural gas, No. 2 distillate fuel oil, or propane.

Insignificant Activities

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

(1) one (1) natural gas-fired thermal oxidizer, identified as Afterburner J, rated at 1.4 MMBtu per hour, controlling VOC and HAP emissions from the Cold Box core machine, and exhausting through stack 37-1-E-2;

(b) 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]

(c) Activities associated with emergencies, including the following:

(A) Emergency generators as follows:

(i) Diesel generators not exceeding one thousand six hundred (1,600) horsepower, including:

(1) One (1) O'Brien emergency generator rated at 1000KW, powered by a 1600 HP diesel engine.

(2) One (1) Kohler Line Melt holding furnace emergency generator rated at 750KW powered by one (1) 1170HP diesel engine.

(3) One (1) Hercules Line Melt furnace emergency generator rated at 55KW powered by one (1) 80 HP diesel engine.

(d) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(e) Paved and unpaved roads and parking lots with public access; and

(f) 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].

(g) 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 PM_{10} emissions before control are less than twenty-five (25) pounds per day.

(6) The following petroleum aboveground storage tanks (AST):

(A) one (1) 2,000 gallon diesel fuel AST;

(B) one (1) 1,000 gallon propane ASTs;

(C) one (1) 275 gallon Dextron EF AST;

(D) one (1) 275 gallon anti-freeze AST;

(E) one (1) 275 gallon motor oil AST;

(F) one (1) 275 gallon hydraulic oil AST;

(G) one (1) 120 gallon propane AST;

(H) one (1) 275 gallon hydraulic oil AST;

(I) one (1) 275 gallon fuel oil AST;

(J) one (1) 500 gallon propane AST;

(K) one (1) 2,000 gallon fuel oil AST; and

(L) one (1) 800 gallon foam AST.

Existing Approvals

Since the issuance of the Part 70 Operating Permit T091-6295-00020 on December 30, 2002, the source has constructed or has been operating under the following approvals as well:

(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.

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

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations (1 through 28).

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.

[1]Unclassifiable 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 PM2.5.

(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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	greater than 100
PM_{10}	greater than 100
SO_2	less than 100
VOC	greater than 100
CO	greater than 100
NO_x	less than 100

HAPs	tons/year
Single HAP	greater than 10
Total HAPs	greater than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{10} , VOC and CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the source has agreed to limit their single HAP emissions and total HAP emissions below Title V limits. Therefore, the source will not be a major source of HAPs.

(d) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are counted toward the determination of Part 70 applicability.

Part 70 Permit Conditions

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

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit (tons/yr)							
Emission Units	**PM (tons/yr)**	**PM_{10} (tons/yr)**	**SO_2 (tons/yr)**	**VOC (tons/yr)**	**CO (tons/yr)**	**NOx (tons/yr)**	**Single HAPs (tons/yr)**	**Total HAPs (tons/yr)**
Electric Induction Fur.	< 25	<15	0	0	0	0	0.27 (Lead)	0.39
Charge Handling			0	0	0	0	0.47 (manganese)	0.57
A-Line pouring	< 25	216.55	2.1	3.5	630.72	1.05	0.54 (Manganese)	0.66
A-line Cooling		147.17	0	0		0	0.76 (Manganese)	0.93
A-line Shakeout		235.47	0	126.14		0	0.19 (Manganese)	0.23
A-line Muller and Sand handling		less than 15	0	0	0	0	0	0
B-Line pouring	< 25	81.21	0.79	< 40	94.5	0.39	0.65 (Manganese)	0.8
B-line Cooling		55.19	0	0		0	0.22 (Manganese)	0.27
B-line Shakeout		88.3	0	< 40		0	0.10 (Manganese)	0.13
B-line Muller and Sand handling	< 25	236.52	0	0	0	0	0	0
Floor pouring	110.38	54.14	0.53	3.68	157.68	0.26	0.33 (Manganese)	0.4
Floor Cooling	36.79	36.79	0	0		0	0.11 (Manganese)	0.13
Floor Shakeout	84.1	58.87	0	31.54		0	0.25 (Manganese)	0.3
Floor knockout	110.2	147.17	0	78.84	0	0	0.05 (Manganese)	0.06
High Speed Mixer and Sand handling	< 25	< 15	0	< 40	0	0	0.53 (Xylene)	0.9
Cold box sand mixer and sand handling	58.25	13.72	0	0	0	0	0	0
Cold Box core making	0	0	0	5.69	0	0	0.02 Naphthalene	0.04

	Potential To Emit (tons/yr)							
Emission Units	**PM (tons/yr)**	**PM_{10} (tons/yr)**	**SO_2 (tons/yr)**	**VOC (tons/yr)**	**CO (tons/yr)**	**NOx (tons/yr)**	**Single HAPs (tons/yr)**	**Total HAPs (tons/yr)**
Cold Box Line Sand Hopper Elevator	58.25	13.72	0	0	0	0	0	0
No Bake Mixers and sand handling	less than 25	14.19	0	less than 40	0	0	0	0
No Bake Core/Mold making		0	0		0	0	0.51 (Xylene)	0.8
No Bake Line sand hopper		14.19	0		0	0	0	0
Warm Box Core Making #1	0	0	0	5.33	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Core Making #2	0	0	0	6.53	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Core Making #3	0	0	0	6.08	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Mixer 1	41.57	8.28	0	0	0	0	0	0
Warm Box Mixer 2	23.56	3.55	0	0	0	0	0	0
Warm Box Line Sand Hopper	52.78	11.83	0	0	0	0	0	0
Wheelabrator shot blast	< 25	< 15	0	0	0	0	0.28 (Manganese)	0.34
Chill iron shot blast	26.15	13.03	0	0	0	0	0.005 (Manganese)	0.006
Pouring, Cooling and shakeout	0	0	0	0	0	0	1.88 (Benzene)	3.9
New scrap handling crusher	< 25	< 15	0	0	0	0	0	0
New scrap handling rotary reclaimer			0	0	0	0	0.02 (Manganese)	0.03
Raw sand storage silo			0	0	0	0	0	0
Spent sand storage silo			0	0	0	0	0	0
Sand and metal Conveyor			0	0	0	0	0	0
High Speed Mixer and Sand handling			0	< 40	0	0	0.53 (Xylene)	0.9
Surface Coating	0.29	0.29	0	7.11	0	0	0	0
Dip Tank	0	0	0	3.06	0	0	0	0

	Potential To Emit (tons/yr)							
Emission Units	**PM (tons/yr)**	**PM_{10} (tons/yr)**	**SO_2 (tons/yr)**	**VOC (tons/yr)**	**CO (tons/yr)**	**NOx (tons/yr)**	**Single HAPs (tons/yr)**	**Total HAPs (tons/yr)**
Pave roadway	0.44	0.15	0	0	0	0	0	0
Pre-heater	0.1	0.4	0	0.3	4.8	4.7	0.1 (Hexane)	0.11
Afterburner	0.01	0.05	0	0.03	0.5	0.6	0.01 (Hexane)	0.011
Emergency Generators	0.5	0.5	2.9	0.5	3.9	8.5	0	0
Insignificant Activities	4.51	4.51	0	0	0	0	0	0
Total Emissions	> 100	> 100	6.36	> 100	> 100	17.8	less than 10	less than 25

(a) This existing stationary source is major for PSD because the emissions of at least one criteria pollutant are greater than one hundred (>100) tons per year, and it is one of the twenty-eight (28) listed source categories.

(b) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Federal Rule Applicability

The following federal rules are applicable to the source:

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

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit-Pollutant	**Control Device Used**	**Emission Limitation (Y/N)**	**Uncontrolled PTE of PM and PM_{10} (tons/year)**	**Controlled PTE of PM and PM_{10} (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Electric Induction Fur.- PM10	Y	Y	75.34	4.3	100	N	N
Charge Handling - PM10	N	Y	31.54	9.0	100	N	N
A-Line pouring PM10	N	N	216.55	51.5	100	N	N
A-line Cooling PM10	N	N	147.17	35.0	100	N	N

Emission Unit-Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE of PM and PM_{10} (tons/year)	Controlled PTE of PM and PM_{10} (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
A-line Shakeout PM10	Y	N	235.47	6.1	100	N	N
A-line Muller and Sand handling PM10	Y	N	473.04	3.74	100	N	N
A-Line pouring - PM	N	Y	441.5	105	100	N	N
A-line Cooling PM	N	Y	147.17	35	100	N	N
A-line Shakeout PM	Y	Y	336.38	8.72	100	Y	N
A-line Muller and Sand handling PM	Y	Y	3153.6	24.9	100	Y	N
B-Line pouring PM10	N	Y	81.21	32.45	100	N	N
B-line Cooling PM10	N	Y	55.19	22.05	100	N	N
B-line Shakeout PM10	Y	Y	88.3	7.34	100	N	N
B-line Muller and Sand handling PM10	Y	Y	236.52	1.05	100	Y	N
B-line Muller and Sand handling PM	Y	Y	1576.8	6.97	100	Y	N
Floor pouring PM10	N	N	54.14	54.14	100	N	N
Floor Cooling PM10	N	N	36.79	36.79	100	N	N
Floor Shakeout PM10	N	N	58.87	58.87	100	N	N
Floor knockout PM10	Y	N	147.17	30.61	100	N	N
Floor knockout PM	Y	Y	210.24	43.72	100	Y	N
High Speed Mixer and Sand handling PM10	Y	Y	99.34	0.01	100	N	N
Cold box sand mixer and sand handling PM10	Y	N	13.72	3.35	100	N	N
No Bake Mixers and sand handling PM10	Y	N	94.61	3.65	100	N	N
Warm Box Mixer 1 PM10	Y	N	8.28	2.13	100	N	N
Warm Box Mixer 2 PM10	Y	N	3.55	0.91	100	N	N
Warm Box Line Sand Hopper PM10	Y	N	11.83	3.05	100	N	N
Wheelabrator shot blast PM10	Y	Y	230.83	1.27	100	Y	N

Emission Unit-Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE of PM and PM_{10} (tons/year)	Controlled PTE of PM and PM_{10} (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Wheelabrator shot blast PM	Y	Y	2308.26	12.7	100	Y	N
Chill iron shot blast PM10	Y	N	13.03	0.26	100	N	N
New scrap handling crusher PM10	Y	Y	3.29	0.33	100	N	N
New scrap handling rotary reclaimer PM10	Y	Y	147.17	1.62	100	Y	N
New scrap handling rotary reclaimer PM	Y	Y	210.24	2.31	100	Y	N
Raw sand storage silo PM10	Y	Y	23.65	0.13	100	N	N
Spent sand storage silo PM10	Y	Y	23.65	0.26	100	N	N
Sand and metal Conveyor PM10	Y	Y	23.65	2.39	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to B-Line muller and sand handling, Wheelabrator shot blast, and New scrap handling rotary reclaimer for PM_{10} and A-Line shakeout, A-Line muller and sand handling, B-Line muller and sand handling, Floor knockout, Wheelabrator shot blast and New scrap handling rotary reclaimer for PM upon issuance of the Title V Renewal. A CAM plan will be incorporated into this Part 70 permit renewal.

Emission Unit-Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE of VOC (tons/year)	Controlled PTE of VOC (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
A-Line pouring	N	N	14.72	3.5	100	N	N
A-line Shakeout	N	N	126.14	30	100	N	N
B-Line pouring	N	Y	5.52	2.21	100	N	N
B-line Shakeout	N	Y	47.3	18.9	100	N	N
Floor pouring	N	N	3.68	3.68	100	N	N
Floor Shakeout	N	N	31.54	31.54	100	N	N
Floor knockout	N	N	78.84	78.84	100	N	N
High Speed Mixer and Sand handling	N	Y	699.05	14.0	100	N	N
Cold Box core making	N	N	96.54	5.69	100	N	N
No Bake Core/Mold making	N	N	115.35	12.6	100	N	N
Warm Box Core Making #1	N	N	20.43	5.33	100	N	N
Warm Box Core Making #2	N	N	20.43	6.53	100	N	N
Warm Box Core Making #3	N	N	20.43	6.53	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to any of the existing units as part of this Part 70 permit renewal.

Emission Unit-Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE of HAP (tons/year)	Controlled PTE of HAP (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Electric Induction Fur.	Y	Y	single < 10, Total < 25	0.39	10/25	N	N
Charge Handling	N	Y	single < 10, Total < 25	0.57	10/25	N	N
A-Line pouring	N	Y	single < 10, Total < 25	0.66	10/25	N	N
A-line Cooling	N	Y	single < 10, Total < 25	0.93	10/25	N	N
A-line Shakeout	Y	Y	single < 10, Total < 25	0.23	10/25	N	N
B-Line pouring	N	Y	single < 10, Total < 25	0.8	10/25	N	N
B-line Cooling	N	Y	single < 10, Total < 25	0.27	10/25	N	N
B-line Shakeout	Y	Y	single < 10, Total < 25	0.13	10/25	N	N
Floor pouring	N	N	single < 10, Total < 25	0.4	10/25	N	N
Floor Cooling	N	N	single < 10, Total < 25	0.13	10/25	N	N
Floor Shakeout	N	N	single < 10, Total < 25	0.3	10/25	N	N
Floor knockout	Y	N	single < 10, Total < 25	0.06	10/25	N	N
High Speed Mixer and Sand handling	N	Y	single > 10, Total > 25	0.9	10/25	N	N
Cold Box core making	N	N	single < 10, Total < 25	0.04	10/25	N	N
No Bake Core/Mold making	N	N	single < 10, Total < 25	0.8	10/25	N	N
Warm Box Core Making #1	N	N	single < 10, Total < 25	1.44	10/25	N	N
Warm Box Core Making #2	N	N	single < 10, Total < 25	1.44	10/25	N	N
Warm Box Core Making #3	N	N	single < 10, Total < 25	1.44	10/25	N	N
Wheelabrator shot blast	Y	Y	single > 10, Total > 25	0.34	10/25	Y	N
Chill iron shot blast	Y	Y	single < 10, Total < 25	0.006	10/25	N	N
New scrap handling rotary reclaimer	Y	Y	single < 10, Total < 25	0.03	10/25	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to Wheelabrator shot blast for HAP upon issuance of the Title V Renewal. A CAM plan will be incorporated into this Part 70 permit renewal.

Emission Unit-Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE of CO (tons/year)	Controlled PTE of CO (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
A-Line pouring	N	N	630.72	150	100	N	N
A-line Cooling	N	N			100	N	N
A-line Shakeout	Y	N			100	N	N
B-Line pouring	N	Y	236.52	94.6	100	N	N
B-line Cooling	N	Y			100	N	N
B-line Shakeout	N	Y			100	N	N
Floor pouring	N	N	157.68	157.68	100	N	N
Floor Cooling	N	N			100	N	N
Floor Shakeout	N	N			100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM for CO are not applicable to any of the existing units as part of this Part 70 permit renewal.

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

(b) Pursuant to Significant Permit Modification No. 091-20949-00020, on April 19, 2007, the source has taken limits to be a minor source for HAPs.

Metallic HAPs Limits

(1) Emissions of lead from the four (4) electric induction furnaces, identified as 1, 2, 3, and 4 shall be less than 2.32 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(2) Emissions of manganese from the four (4) electric induction furnaces, identified as 1, 2, 3, and 4 shall be less than 0.66 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(3) Emission of any combination of HAPs from the four (4) electric induction furnaces identified as 1, 2, 3, and 4 shall be less than 2.43 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(4) Emissions of lead from the charge handling system shall be less than 0.10 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(5) Emissions of manganese from the charge handling system shall be less than 0.47 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(6) Emissions of any combination of HAPs from the charge handling system shall be less than 0.57 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(7) Total emissions of lead from the A-Line Pouring, Cooling, and Shakeout operations shall be less than 1.10 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(8) Total emissions of manganese from the A-Line Pouring, Cooling, and Shakeout operations shall be less than 3.04 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(9) Total emissions of any combination of metal HAPs from the A-Line Pouring, Cooling, and Shakeout operations shall be less than 3.71 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(10) Total emissions of lead from the B-Line Pouring, Cooling, and Shakeout operations shall be less than 0.65 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(11) Total emissions of manganese from the B-Line Pouring, Cooling, and Shakeout operations shall be less than 1.36 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(12) Total emissions of any combination of metal HAPs from the B-Line Pouring, Cooling, and Shakeout operations shall be less than 1.67 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(13) 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;

(14) 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;

(15) 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;

(16) 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;

(17) 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;

(18) 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;

(19) 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;

(20) 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;

(21) 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.

(22) 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;

(23) 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;

(24) 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.

Organic HAP limits

(1) 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;

(2) 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;

(3) 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;

(4) 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;

(5) 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;

(6) 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;

(7) 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;

(8) Emissions of phenol from the A-Line Pouring, Cooling and Shakeout operations and the B-Line Pouring, Cooling and Shakeout operations combined shall be less than 1.85 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(9) Emissions of benzene from the A-Line Pouring, Cooling and Shakeout operations and the B-Line Pouring, Cooling and Shakeout operations combined shall be less than 2.41 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(10) 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 combined shall be less than 2.41 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(11) 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;

(12) 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;

(13) 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;

(c) On January 2, 2004, U.S. EPA promulgated a NESHAP for the surface coating of miscellaneous metal parts and products. The requirements of the NESHAP, 40 CFR 63.3880 - 63.3981, Subpart MMMM, Surface Coating of Miscellaneous Metal Parts and Products apply to an existing affected source, as defined in 40 CFR 63.3882, that uses 946 liters (250 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products that is located at a major source of emissions of HAP. Pursuant to 40 CFR 63.3881(b), coatings that meet the definition of non-HAP coating contained in 40 CFR 63.3981 do not need to be included in determining whether 946 liters (250 gal) per year, or more, of coatings are used in the surface coating of miscellaneous metal parts and products. The coatings now used in the one (1) paint spray booth, identified as Spray Painting and one (1) dip tank, identified as Dip Tank Painting, which have been in use since prior to the NESHAP compliance date of January 2, 2007, do not contain any HAPs because ethylene glycol monobutyl ether (2-Butoxyethanol) was de-listed as a HAP on November 29, 2004 by the EPA and there are no other HAPs contained in the coatings used. Therefore, the requirements of this rule are not included in the permit for the one (1) paint spray booth, identified as Spray Painting and one (1) dip tank, identified as Dip Tank Painting because each facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)
This source is one of the 28 listed source categories and have potential to emit of at least one attainment pollutant greater than 100 tons per year before August 7, 1977. This source was a major source pursuant to 326 IAC 2-2 (PSD), prior to August 7, 1977.

1979 Modification
The No Bake sand mixer and sand handling, No Bake core/mold making and No Bake line sand hopper, constructed in 1979 have uncontrolled PM emissions of greater than 25 tons per year. Pursuant to the Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007 and revised by operating Permit 091-24543-00020, the PM emissions from the No Bake sand mixer and sand handling, No Bake core/mold making and No Bake line sand hopper shall be less than 1.9 pounds per hour, each. Compliance with the limit above will limit the PM emissions to less than 25 tons per year and render 326 IAC 2-2 not applicable to the 1979 modification.

The No Bake core machine constructed in 1979 has uncontrolled VOC emissions greater than 40 tons per year. Pursuant to the Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007, the resin usage for the No Bake core machine shall be less than 255,867 pounds of

resin per twelve (12) consecutive month period and the catalyst usage for the No bake core machine shall be less than 63,967 pounds of VOC catalyst per twelve (12) consecutive month period, with compliance determined at the end of the month. The VOC emissions from the resin usage in the No bake core machine shall be less than 0.05 pounds per pounds of resin. Compliance with the limits above will limit VOC emissions of the No bake core machine to less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month, and will render 326 IAC 2-2 (PSD) not applicable to the 1979 modification.

1981 Modification
The Warm Box Core Machine #3 and Warm Box mixer 2, constructed in 1981, have uncontrolled PM emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1981 modification.

The Warm Box Core Machine #3 and Warm box mixer 2, constructed in 1981, have uncontrolled VOC emissions of less than 40 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1981 modification.

1982 Modification
The Surface coating operation, constructed in 1982, has uncontrolled PM emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1982 modification.

The Surface coating operation, constructed in 1982, has uncontrolled VOC emissions of less than 40 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1982 modification.

1984 Modification
The A-Line Sand Cooler, A-Line Muller and A-Line Holding Silo, constructed in 1984 have uncontrolled PM and PM10 emissions greater than 25 and 15 tons per year, respectively. Pursuant to the Significant Permit Modification No. 091-20949- 00020, issued on April 19, 2007 and , the sand throughput 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 the month. The PM and PM10 emissions from the A-Line Muller and A-Line Holding Silo shall be less than 0.107 and 0.064 pounds per ton of sand throughput, respectively. Compliance with the limits above will limit PM emissions to less than 25 tons per year and render 326 IAC 2-2 (PSD) not applicable to the 1984 modification.

1986 and 1987 Modification

(a) The B-Line Pouring, B-Line Cooling, and B-Line Shakeout operations, constructed in a twelve month period from 1986 to 1987 have uncontrolled PM emissions of greater than 25 tons per year. Pursuant to Operating Permit No 091-6295-00020, issued on December 30, 2002, the throughput of metal to each of the B-Line Pouring, B-Line Cooling, and B-Line Shakeout operations shall be less than 31,500 tons per twelve (12) consecutive month period. Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007, the PM emission rate of the B-Line Pouring, B-Line Cooling, and B-Line Shakeout operations shall be less than 0.37 pound per ton of metal throughput. Compliance with the above emission limits established, combined with the PM emissions from the B-line Muller and B-Line holding shall limit the PM emissions to less than 25 tons per year and render 326 IAC 2-2 not applicable to the 1986 and 1987 modification.

(b) The B-line Muller and B-Line holding constructed in a twelve month period from 1986 to 1987 have uncontrolled PM emissions of greater than 25 tons per year. Pursuant to Operating Permit No 091-6295-00020, issued on December 30, 2002, the throughput of sand to the B-Line Muller and B-Line holding shall be less than 130,000 tons per twelve

(12) consecutive month period. Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007, the PM emission rate of the B-line Muller and B- Line holding shall be less than 0.29 pound per ton of sand throughput. Compliance with the above emission limits established, combined with the PM emissions from the B-Line Pouring, B-Line Cooling, and B-Line Shakeout operations shall limit the PM emissions to less than 25 tons per year and render 326 IAC 2-2 not applicable to the 1986 and 1987 modification.

Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007, the metal throughput to the B-Line pouring , B-Line Cooling and B-Line shakeout operations shall be less than 31,500 tons per year and the CO emissions shall be less than 6.0 pounds per ton of metal throughput. This will limit the CO emissions to less than 100 tons per year and render the requirements of 326 IAC 2-2 (PSD) not applicable to the 1986 and 1987 modification.

The B-Line Shakeout and B-Line Pouring, constructed in 1987, have uncontrolled VOC emissions greater than 40 tons/yr. Pursuant to Operating Permit No 091-6295-00020, issued on December 30, 2002, the source will limit the throughput of metal to the B-Line Shakeout and B-Line pouring to less than 31,500 tons of metal per twelve (12) consecutive month periond with compliance determined at the end of each month period. 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 an 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.

1990 Modification
The Wheelabrator shot blast machine, constructed in 1990 has uncontrolled PM and PM_{10} emissions of greater than 25 and 15 tons per year respectively. Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007 and revised by this Operating Permit T091-24543-00020, the throughput of metal to the Wheelabrator shot blast machine shall be less than 50,000 tons per twelve (12) consecutive month period. The PM and PM_{10} emissions from the Wheelabrator shot blast machine shall be less than 0.7 and 0.42 pounds per ton, respectively. Compliance with the limits above will limit the PM and PM_{10} emissions to less than 25 and 15 tons per year and render 326 IAC 2-2 not applicable to 1990 modification.

1991 Modification
The four (4) electric induction furnaces, identified as 1, 2, 3, and 4, constructed in 1991 have uncontrolled PM and PM_{10} emissions of greater than 25 and 15 tons per year, respectively. Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007 and revised by operating permit T091-24543-00020, the throughput of metal to each of the following facilities shall be less than 50,000 tons metal throughput per twelve (12) consecutive month period. The PM and PM_{10} emissions from the four (4) electric induction furnaces, identified as 1, 2, 3, and 4 shall be less than 0.57 and 0.33 pounds per ton of metal throughput, respectively. Compliance with the limits combined with the emission increase from the metal charging operation due to 1991 modification limits shall limit the PM and PM_{10} emissions to less than 25 and 15 tons per year, respectively and render the requirements of 326 IAC 2-2 not applicable to the 1991 modification.

The uncontrolled VOC emissions of the Electric induction furnace, constructed in 1991 are less than 40 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 1991 modification.

2001 Modification
(a) The High Speed Continuous Sand Mixer, Raw sand storage silo and Spent Sand storage silo, constructed in 2001 have uncontrolled PM and PM_{10} emissions greater than 25 and 15 tons per year respectively. Pursuant to Significant Source Modification No. 091-12963- 00020, issued on April 6, 2001 and revised by Operating Permit T091-6295-

00020, issued on December 30, 2002, 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. The PM and PM_{10} emission of the High Speed Continuous Sand Mixer, Spent sand storage silo and Raw sand storage silo shall be less than 0.01 and 0.01 pound per ton of sand throughput, respectively. Compliance with the limits above, combined with the PM and PM_{10} mission from the New scrap handling crusher, New scrap handling rotary reclaimer, and metal conveyor, also constructed in 2001 shall limit the PM and PM_{10} emissions to less than 25 and 15 tons per year and render the requirements of 326 IAC 2-2 not applicable to the 2001 modification.

(b) The New scrap handling crusher, New scrap handling rotary reclaimer, and metal conveyor, constructed in 2001 have uncontrolled PM and PM_{10} emissions greater than 25 and 15 tons per year respectively. Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19, 2007 and revised by Operating Permit T091-24543-00020, the throughput of metal to the 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, each. The PM and PM_{10} emission from the 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. Compliance with the limits above combined with the PM and PM_{10} emissions from the High Speed Continuous Sand Mixer, Raw sand storage silo and Spent Sand storage silo, also constructed in 2001 shall limit the PM and PM_{10} emissions to less than 25 and 15 tons per year and render the requirements of 326 IAC 2-2 not applicable to the 2001 modification.

The High Speed Continuous Sand Mixer, constructed in 2001 has uncontrolled VOC emissions greater than 40 tons per year. Pursuant to the Significant Permit Modification No. 091-20949-00020 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. The catalyst usage for the High Speed Continuous Sand Mixer, shall be less than 26,211 pounds of VOC catalyst per twelve (12) consecutive month period. The VOC emissions from the resin usage in the High Speed Continuous Sand Mixer, shall be less than 0.05 pounds per pounds of resin. Compliance with the limits above shall limit the VOC emissions to less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month, and will render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2001 modification.

2007 Modification
The natural gas-fired preheater, constructed in 2007, has uncontrolled PM and PM_{10} emissions less than 25 and 15 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 2007 modification.

The natural gas-fired preheater, constructed in 2007, have uncontrolled VOC emissions of less than 40 tons per Year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 2007 modification.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule specified in 326 IAC 2-6-3, an emission statement must be submitted triennially by July 1 beginning in 2004 and every 3 years after. Therefore, the next emission statement for this source must be submitted by July 1, 2010. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

326 IAC 2-4.1-1 (New Source Toxic Control)
Pursuant to Significant Permit Modification No. 091-20949-00020 , this source will emit less than 10 tons per year of any single HAPs or less than 25 tons per year of combinations of HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not applicable to this source.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e), the particulate emissions from the one (1) machine operation, thirty (30) machines performing tapping, drilling and reaming on the metal castings, six (6) machines and three (3) machines and eight (8) machines 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.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e), the particulate emissions from the insignificant activities, 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.

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:

Operation	Process weight (tons/hr)	Allowable Limits (lbs/hr)
Electric Furnace #1	5	12.05
Electric Furnace #2	5	12.05
Electric Furnace #3	5	12.05
Electric Furnace #4	5	12.05
Charge handling	20	30.5
A-Line Pouring	234	60.23

A-Line Cooling	234	60.23
A-Line Shakeout	234	60.23
A-Line Muller and sand handling	200	58.51
Operation	Process weight (tons/hr)	Allowable Limits (lbs/hr)
B-Line Pouring	113	52.51
B-Line Cooling	113	52.51
B-Line Shakeout	113	52.51
B-Line Muller and sand handling	100	51.28
Floor Pouring	35	41.32
Floor Cooling	35	41.32
Floor shakeout	35	41.32
Knockout Station	15	25.16
High Speed Continuous Mixer and Floor Sand handling	42	42.97
Wheelabrator Shot Blast	31	40.24
Chill Iron Shot Blast	1.75	5.97
Metal Scrap Crusher	15	25.16
Rotary Reclaimer	25	35.43
Spent Sand Storage Silo	10	19.18
Sand and Metal Conveyor	25	35.43
Raw Sand Storage Silo	10	19.18
Cold Box Sand mixer	5.8	13.3
Cold Box line sand hopper	5.8	13.3
No Bake sand mixer	6	13.6
No bake line sand hopper	6	13.6
Warm Box Mixer 1	3.5	9.49
Warm Box Mixer 2	1.5	5.38
Warm Box Line sand hopper	5	12.05

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.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions 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.

326 IAC 6-3-2 (Particulate Emission Limitations for Work Practices and Control Technologies)
Pursuant to 326 IAC 6-3-2(d), the particulate matter (PM) from the paint spray booth, identified as spray painting shall be controlled by dry filters, and the Permittee shall operate the filters in accordance with manufacturer's specifications.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(5), the dip tank is exempt from the 326 IAC 6-3 rule.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

(a) The dip tank, identified as Dip tank Painting was constructed prior to January 1, 1980. Therefore, the requirements of 326 IAC 8-2-9 are not applicable.

(b) Pursuant to 326 IAC 8-2-1(a)(2), the paint spray booth, identified as Spray Painting was constructed in 1982, but has a potential to emit of VOC of less than 25 tons/yr. Therefore, the requirements of 326 IAC 8-2-9 are not applicable to this unit.

326 IAC 11-1 (Existing Foundries)
This source is not subject to the requirements of this rule. This rule sets particulate matter emission limit for foundries in operation on or before December 6, 1968. Although this source was in operation before December 6, 1968, it does not contain a cupola.

326 IAC 8-1-6 (New Facilities; General reduction Requirements)
(a) The potential VOC emissions from the warm Box core making #3, constructed in 1981 is less than 25 tons/yr. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to this emission unit.

(b) The potential VOC emissions from the paint spray booth, identified as Spray Painting, constructed in 1982 is less than 25 tons/yr. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to this emission unit.

(c) The potential VOC emissions from the B-Line pouring, constructed in 1986 is less than 25 tons/yr. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to this emission unit.

(d) The A-Line Pouring, Floor pouring, Floor Shakeout, Floor Knockout, Cold Box Core making, No Bake Core/Mold making and the Warm Box core machines #1 and #2 were constructed before 1980, the applicability date for this rule. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to these emission units.

(e) The potential VOC emissions from the B-Line Shakeout, constructed in 1987 is greater than 25 tons/yr. Pursuant to Operating Permit No 091-6295-00020, issued on December 30, 2002 and revised by Operating Permit T091-24543-00020, the source will limit the throughput of metal to the B-Line Shakeout to less than 31,500 tons of metal per twelve (12) consecutive month periond with compliance determined at the end of the month.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 to less than 25 tons/yr and render the requirements of 326 IAC 8-1-6 not applicable to these emission units.

(f) The potential VOC emissions from the High Speed continuous sand mixer, constructed in 2001 is greater than 25 tons/yr. Pursuant to Significant Permit Modification No. 091-20949-00020, issued on April 19 2007, the source will limit resin usage to less than 471,789 pounds of resin per twelve (12) consecutive month periond and catalyst usage to less than 26211 pounds of VOC catalyst per twelve (12) consecutive month period with compliance determined at the end of the month and the VOC emissions from the High speed continuous sand mixer shall be less than 0.05 pound per pound of resin, compliance with above limits will limit the potential VOC emissions from the High Speed continuous sand mixer to less than 25 tons/yr and render the requirements of 326 IAC 8-1-6 not applicable to this emission unit.

Testing Requirements

(a) HAPs Testing

Emission Units	Control Device	Next Test date	Pollutants	Frequency of testing
One Electric Furnace	Dust Collector	Within nine (9) months after the issuance of T091-24543-00020	Any Single HAPs (lead and manganese) Total metal HAPs	Every five years
A-Line Pouring, A-Line cooling and A-Line Shakeout	Baghouse control for the A-Line Shakeout	Within 180 days after the issuance of T091-24543-00020	Total Organic HAPs Total metal HAPs Any Single HAPs Any Single HAPs	Every five years
Wheelabrator Shotblast Machine and Floor Pouring, Cooling and Knockout	Baghouse control for the Wheelabrator shotblast machine	Within nine (9) months after the issuance of T091-24543-00020	Total metal HAPs Any Single HAP	Every five years
Chill iron shot blast machine	No control	Within nine (9) months after the issuance of T091-24543-00020	Total metal HAPs Any Single HAP	Every five years
High speed Continuous sand mixer	No control	Before October 2012	Total Organic HAPs	Every five years
Indoor scrap handling	Baghouse	Within nine (9) months after the issuance of T091-24543-00020	Total metal HAPs Any Single HAP	Every five years
No Bake core making machine	No control	Within nine (9) months after the issuance of T091-24543-00020	Total Organic HAPs	Every five years

Testing Requirements

(b) PM and PM_{10} Testing

Emission Units	Control Device	Next Test date	Parameters	Pollutants	Frequency of testing
One Electric Furnace	Dust Collector, identified as 39-DC-4	Before December 2010	Water Pressure Drop	PM/PM_{10}	Every five years
Charge Handling	No control	Before December 2010	Water Pressure Drop	PM/PM_{10}	Every five years
A-Line operations	Baghouse, identified as 36-1-DC-8,	Before October 2009	Water Pressure Drop	PM/PM_{10}	Every five years
A-Line Muller and Shakeout, B-Line Muller and Shakeout	Baghouse,	Before July 2008	Water Pressure Drop	PM/PM_{10}	Every five years
Indoor Scrap Handling Operation	Baghouse, identified as 39-DC-5	Before July 2008	Water Pressure Drop	PM/PM_{10}	Every five years
High speed Continuous sand mixer hopper, Knockout Station and Wheelabrator shot blast machine	Baghouse, identified as 30-DC-6, 8-DC-2 and 36-DC-8	Before October 2012	Water Pressure Drop	PM/PM_{10}	Every five years
No Bake sand mixer and No Bake line sand hopper	Baghouse, identified as 37-1-DC-3 and 36-1-DC-7	Within 180 days after the issuance of T091-24543-00020	Water Pressure Drop	PM/PM_{10}	Every five years

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:

(a) Baghouses

Facilities	Control	Parameter	Frequency	Range	Excursions and Exceedances
Four (4) electric furnaces (1, 2, 3 and 4) and Pre-heater	Dust Collector, identified as 39-DC-4	Water Pressure Drop	Daily	1 to 7 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
A-Line holding silo, A-Line Muller and A-line shakeout	Baghouse, identified as 36-1-DC-8	Water Pressure Drop	Daily	2 to 8 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
B-Line holding silo, B-Line Muller, B-line shakeout, Cold box sand mixer, Cold box line sand hopper, No bake line sand hopper, Warm box mixers (1 & 2) and Warm box line sand hopper	Baghouse, identified as 36-1-DC-7	Water Pressure Drop	Daily	2 to 8 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
High speed continuous sand mixer	Baghouse, identified as 30-DC-6	Water Pressure Drop	Daily	1 to 7 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
Wheelabrator	Baghouse, identified as 36-DC-8	Water Pressure Drop	Daily	1 to 7 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
Floor knockout, Chill iron shot blast	Baghouse, identified as 8-DC-2	Water Pressure Drop	Daily	1 to 7 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
Metal scrap crusher, Rotary Reclaimer, Sand and metal conveyor and spent sand storage silo and raw sand storage silo	Baghouse, identified as 39-DC-5	Water Pressure Drop	Daily	1 to 7 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
Core and mold silos (#1 and #2)	Baghouse, identified as 37-1-DC-3	Water Pressure Drop	Daily	2 to 8 inches	Response Steps
		Visible Emissions		Normal-Abnormal	

(b) Paint spray booth

Emission Units	Frequency	Monitoring
Dry Filters for Paint Spray Booth	Daily	Inspection shall be perform to verify the placement, integrity, and particle loading of the dry filters.
Dry Filters for Paint Spray Booth	Weekly	Observation shall be made of the over spray from the paint spray booth stack to monitor the performace of the dry filters
Dry Filters for Paint Spray Booth	Monthly	Inspection shall be performed of the coating emissions from the stack and the presence of over spray on the rooftops and the nearby ground.

Recommendation

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

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

An application for the purposes of this review was received on March 30, 2007.

Conclusion

The operation of this gray iron foundry producing gray iron boilers shall be subject to the conditions of the attached Part 70 Operating Permit No.T091-24543-00020.

Appendix A: Emissions Calculations
Emission Summary

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Uncontrolled Potential Emissions

	Year of Construction	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	Single HAPs (tons/yr)	Total HAPs (tons/yr)
Emission Unit									
Electric Induction Furnace	1991	78.84	75.34	0	0	0	0	4.77 (Lead)	6.8
Charge Handing	1977	52.56	31.54	0	0	0	0	1.63 (Manganese)	1.99
A-line Pouring	1964	441.5	216.55	2.1	14.72		1.05	3.26 (Manganese)	3.98
A-line Cooling	1964	147.17	147.17	0	0	630.72	0	4.56 (Manganese)	5.57
A-line Shakeout	1964	336.38	235.47	0	126.14		0	10.43 (Manganese)	12.74
A-line Muller and Sand handling	1984	3153.6	473.04	0	0	0	0	0	0
B-line pouring	1986	165.56	81.21	0.79	5.52		0.39	5.13 (Manganese)	6.27
B-line Cooling	1986	55.19	55.19	0	0	236.52	0	1.71 (Manganese)	2.09
B-line Shakeout	1987	126.14	88.3	0	47.3		0	3.91 (Manganese)	4.78
B-line Muller and Sand handling	1987	1576.8	236.52	0	0	0	0	0	0
Floor Pouring	1922	110.38	54.14	0.53	3.68		0.26	3.42 (Manganese)	4.18
Floor Cooling	1922	36.79	36.79	0	0	157.68	0	1.14 (Manganese)	1.39
Floor Shakeout	1922	84.1	58.87	0	31.54		0	2.61 (Manganese)	3.19
Floor knockout	1965	210.24	147.17	0	78.84	0	0	6.52 (Manganese)	7.96
Cold Box Sand Mixer	1975	91.45	13.72	0	0	0	0	0	0
Cold Box Core Machine	1975	0	0	0	96.54	0	0	0.38 (Naphthalene)	0.4
Cold box line sand hopper elevator	1975	91.45	13.72	0	0	0	0	0	0
Subtotal Emissions	N/A	**> 100**	**> 100**	**3.42**	**> 100**	**> 100**	**1.7**	**greater than 10**	**61.34**

Single HAPs Worst Case

Appendix A: Emissions Calculations
Emission Summary

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Uncontrolled Potential Emissions

	Year of Construction	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	Single HAPs (tons/yr)	Total HAPs (tons/yr)
Emission Unit									
No Bake Sand Mixer	1979	94.61	14.19	0	0	0	0	0	0
No Bake Core Machine	1979	0	0	0	115.35	0	0	2.74 (Xylene)	6.41
No Bake line sand hopper	1979	94.61	14.19	0	0	0	0	0	0
Warm Box Core making #1	1971	0	0	0	20.43	0	0	3.47 (Ethylene Glycol)	6.25
Warm Box Core making #2	1976	0	0	0	20.43	0	0	3.47 (Ethylene Glycol)	6.25
Warm Box Core making #3	1981	0	0	0	20.43	0	0	3.47 (Ethylene Glycol)	6.25
Warm Box Mixer 1	1971	55.19	8.28	0	0	0	0	0	0
Warm Box Mixer 2	1981	23.65	3.55	0	0	0	0	0	0
Warm Box line Sand Hopper	1971	78.84	11.83	0	0	0	0	0	0
Wheelabrator Shot blast Machine	1990	2308.26	230.83	0	0	0	0	71.56 (Manganese)	87.44
Chill iron Shot blast machine	1972	130.31	13.03	0	0	0	0	4.04 (Manganese)	4.94
Pouring, Cooling & Shakeout (HAPs)	N/A	0	0	0	0	0	0	16.29 (Benzene)	37.17
Metal Scrap Crusher	2001	32.85	3.29	0	0	0	0	0	0
Rotary Reclaimer	2001	210.24	147.17	0	0	0	0	6.52 (Manganese)	7.96
Raw sand storage silo	2001	157.68	23.65	0	0	0	0	0	0
Spent Sand storage silo	2001	157.68	23.65	0	0	0	0	0	0
Sand and Metal Conveyor	2001	157.68	23.65	0	0	0	0	0	0
High Speed Continuous Sand Mixer	2001	662.26	99.34	0	699.05	0	0	18.33 (Xylene)	27.24
Surface coating	1982	2.94	2.94	0	7.11	0	0	0	0
Dip Tank	1970	0	0	0	3.06	0	0	0	0
Unpave roadways	N/A	0.44	0.15	0	0	0	0	0	0
Preheater	2007	0.13	0.53	0.04	0.4	5.9	7	0.1 (Hexane)	0.11
Afterburner	N/A	0.01	0.05	0	0.03	0.5	0.6	0.01(Hexane)	0.011
Emergency Generators	N/A	0.5	0	2.9	0.5	3.9	8.5	0	0
Insignificant Activities	N/A	4.51	4.51	0	0	0	0	0	0
Subtotal Emissions	N/A	4172.39	624.83	2.94	886.79	10.3	16.1	greater than 10	190.031
Total Emissions		**> 100**	**> 100**	**6.36**	**> 100**	**> 100**	**17.8**	**greater than 10**	**251.371**

Single HAPs Worst Case

Appendix A: Emissions Calculations
Emission Summary

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Limited Potential Emissions

	Year of Construction	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	Single HAPs (tons/yr)	Toatal HAPs (tons/yr)
Emission Unit									
Electric Induction Furnaces	1991			0	0	0	0	0.27 (Lead)	0.39
Charge Handing	1977	less than 25	less than 15	0	0	0	0	0.47 (Manganese)	0.57
A-line Pouring	1964		216.55	2.1	3.5		1.05	0.54 (Manganese)	0.66
A-line Cooling	1964		147.17	0	0	630.72	0	0.76 (Manganese)	0.93
A-line Shakeout	1964		235.47	0	30		0	0.19 (Manganese)	0.23
A-line Muller and Sand handling	1984	less than 25	less than 15	0	0	0	0	0	0
B-line pouring	1986		81.21	0.79			0.39	0.65 (Manganese)	0.8
B-line Cooling	1986		55.19	0		94.5	0	0.22 (Manganese)	0.27
B-line Shakeout	1987		88.3	0	less than 25		0	0.1 (Manganese)	0.13
B-line Muller and Sand handling	1987	less than 25	236.52	0	0	0	0	0	0
Floor Pouring	1922	110.38	54.14	0.53	3.68		0.26	0.33 (Manganese)	0.4
Floor Cooling	1922	36.79	36.79	0	0	157.68	0	0.11 (Manganese)	0.13
Floor Shakeout	1922	84.1	58.87	0	31.54		0	0.25 (Manganese)	0.3
Floor knockout	1965	110.2	147.17	0	78.84	0	0	0.05 (Manganese)	0.06
Cold Box Sand Mixer and sand handling	1975	58.25	13.72	0	0	0	0	0	0
Cold Box Core Making	1975	0	0	0	5.69	0	0	0.02 (Naphthalene)	0.04
Cold Box Line Sand Hopper and Elevator	1975	58.25	13.72	0	0	0	0	0	0
Subtotal Emissions		> 100	> 100	3.42	> 100	> 100	1.7	Less than 10	4.91

Single HAPs Worst Case

Appendix A: Emissions Calculations
Emission Summary

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Limited Potential Emissions

	Year of Construction	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	Single HAPs (tons/yr)	Total HAPs (tons/yr)
Emission Unit									
No Bake Mixers and sand handling	1979		14.19	0		0	0	0	0
No Bake Core/Mold Making	1979		0	0		0	0	0.51 (Xylene)	0.8
No Bake Line Sand and Hopper	1979	less than 25	14.19	0	less than 40	0	0	0	0
Warm Box Core making #1	1971	0	0	0	5.33	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Core making #2	1976	0	0	0	6.53	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Core making #3	1981	0	0	0	6.08	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Mixer 1	1971	41.57	8.28	0	0	0	0	0	0
Warm Box Mixer 2	1981	23.56	3.55	0	0	0	0	0	0
Warm Box line Sand Hopper	1971	52.78	11.83	0	0	0	0	0	0
Wheelabrator Shot blast	1990	less than 25	less than 15	0	0	0	0	0.28 (Manganese)	0.34
Chill iron Shot blast	1972	26.15	13.03	0	0	0	0	0.005 (Manganese)	0.006
Pouring, Cooling & Shakeout (HAPs)	N/A	0	0	0	0	0	0	1.88 (Benzene)	3.9
New scrap Handling Crusher	2001			0	0	0	0	0	0
New scrap Handling Rotary reclaimer	2001			0	0	0	0	0.02 (Manganese)	0.03
Raw sand storage silo	2001			0	0	0	0	0	0
Spent Sand storage silo	2001			0	0	0	0	0	0
Sand and Metal Conveyor	2001			0	0	0	0	0	0
High Speed Mixer &sand handling	2001	less than 25	less than 15	0	less than 25	0	0	0.53 (Xylene)	0.9
Surface coating	1982	0.29	0.29	0	7.11	0	0	0	0
Dip Tank	1970	0	0	0	3.06	0	0	0	0
Unpave roadways	N/A	0.44	0.15	0	0	0	0	0	0
Preheat	2007	0.13	0.53	0.04	0.4	5.9	7	0.1 (Hexane)	0.11
Afterburner	N/A	0.01	0.05	0	0.03	0.5	0.6	0.01(Hexane)	0.011
Emergency Generators	N/A	0.5	0	2.9	0.5	3.9	8.5	0	0
Insignificant Activities	N/A	4.51	4.51	0	0	0	0	0	0
Subtotal Emissions	N/A	> 250	less than 100.6	2.94	29.04	10.3	16.1	less than 10	10.296

Total Emissions		> 100	> 100	6.36	> 100	> 100	17.8	single Less than 10	Total less 25

Appendix A: Emissions Calculations
Emission Summary

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Controlled Emissions

	Year of Construction	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	Single HAPs (tons/yr)	Toatal HAPs (tons/yr)
Emission Unit									
Electric Induction Furnaces	1991	4.5	4.3	0	0	0	0	0.27 (Lead)	0.39
Charge Handing	1977	15	9	0	0	0	0	0.47 (Manganese)	0.57
A-line Pouring	1964	105	51.5	2.1	3.5		1.05	0.54 (Manganese)	0.66
A-line Cooling	1964	35	35	0	0	150	0	0.76 (Manganese)	0.93
A-line Shakeout	1964	8.72	6.1	0	30		0	0.19 (Manganese)	0.23
A-line Muller and Sand handling	1984	24.9	3.74	0	0	0	0	0	0
B-line pouring	1986	66.15	32.45	0.79	2.21		0.39	0.65 (Manganese)	0.8
B-line Cooling	1986	22.05	22.05	0	0	94.5	0	0.22 (Manganese)	0.27
B-line Shakeout	1987	10.48	7.34	0	18.9		0	0.1 (Manganese)	0.13
B-line Muller and Sand handling	1987	6.97	1.05	0	0	0	0	0	0
Floor Pouring	1922	110.38	54.14	0.53	3.68		0.26	0.33 (Manganese)	0.4
Floor Cooling	1922	36.79	36.79	0	0	157.68	0	0.11 (Manganese)	0.13
Floor Shakeout	1922	84.1	58.87	0	31.54		0	0.25 (Manganese)	0.3
Floor knockout	1965	43.72	30.61	0	78.84	0	0	0.05 (Manganese)	0.06
Cold Box Sand Mixer and sand handling	1975	23.55	3.53	0	0	0	0	0	0
Cold Box Core Making	1975	0	0	0	5.69	0	0	0.02 (Naphthalene)	0.04
Cold Box Line Sand Hopper and Elevator	1975	23.55	3.53	0	0	0	0	0	0
Subtotal Emissions		620.86	360	3.42	174.36	402.18	1.7	Less than 10	4.91

Single HAPs Worst Case

Appendix A: Emissions Calculations
Emission Summary

Source Name: Weil McLain
Source Location: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Controlled Potential Emissions

	Year of Construction	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	Single HAPs (tons/yr)	Total HAPs (tons/yr)
Emission Unit									
No Bake Mixers and sand handling	1979	24.36	3.65	0	0	0	0	0	0
No Bake Core/Mold Making	1979	0	0	0	12.6	0	0	0.51 (Xylene)	0.8
No Bake Line Sand and Hopper	1979	24.36	3.65	0	0	0	0	0	0
Warm Box Core making #1	1971	0	0	0	5.33	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Core making #2	1976	0	0	0	6.53	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Core making #3	1981	0	0	0	6.08	0	0	0.8 (Ethylene Glycol)	1.44
Warm Box Mixer 1	1971	14.21	2.13	0	0	0	0	0	0
Warm Box Mixer 2	1981	6.09	0.91	0	0	0	0	0	0
Warm Box line Sand Hopper	1971	20.3	3.05	0	0	0	0	0	0
Wheelabrator Shot blast	1990	12.7	1.27	0	0	0	0	0.28 (Manganese)	0.34
Chill iron Shot blast	1972	2.59	0.26	0	0	0	0	0.005 (Manganese)	0.006
Pouring, Cooling & Shakeout (HAPs)	N/A	0	0	0	0	0	0	1.88 (Benzene)	3.9
New scrap Handling Crusher	2001	3.31	0.33	0	0	0	0	0	0
New scrap Handling Rotary reclaimer	2001	2.31	1.62	0	0	0	0	0.02 (Manganese)	0.03
Raw sand storage silo	2001	0.84	0.13	0	0	0	0	0	0
Spent Sand storage silo	2001	1.73	0.26	0	0	0	0	0	0
Sand and Metal Conveyor	2001	15.91	2.39	0	0	0	0	0	0
High Speed Mixer &sand handling	2001	0.08	0.01	0	14	0	0	0.53 (Xylene)	0.9
Surface coating	1982	0.29	0.29	0	7.11	0	0	0	0
Dip Tank	1970	0	0	0	3.06	0	0	0	0
Unpave roadways	N/A	0.44	0.15	0	0	0	0	0	0
Preheat	2007	0.13	0.53	0.04	0.4	5.9	7	0.1 (Hexane)	0.11
Afterburner	N/A	0.01	0.05	0	0.03	0.5	0.6	0.01(Hexane)	0.011
Emergency Generators	N/A	0.5	0	2.9	0.5	3.9	8.5	0	0
Insignificant Activities	N/A	4.51	4.51	0	0	0	0	0	0
Subtotal Emissions	N/A	134.67	25.19	2.94	55.64	10.3	16.1	less than 10	10.296
Total Emissions		755.53	385.19	6.36	230	412.48	17.8	single Less than 10	Total less 25

Appendix A: Emission Calculations

Company Name: Weil McLain
Address City In Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Permit Reviewer: Josiah Balogun
Date: 15-Aug-2007

Core Making Process

Machine	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lbs/ton core)	Max. Catalyst Usage (lb/ton cores)	Uncontrolled VOC Emissions from resin Evap. (tons/yr)	Uncontrolled VOC Emissions from Catalyst Usage (tons/yr)	Total Uncontrolled VOC Emissions (tons/yr)
Cold Box Core Machine	5.8	1.0%	1	2.8	25.40	71.13	96.54
No Bake Core Machine	6	3.0%	3	1.53	78.84	36.51	115.35
Warm Box Core Machine #1	1.73	1.0%	0	5.7	0.00	20.43	20.43
Warm Box Core Machine #2	1.73	1.0%	0	5.7	0.00	20.43	20.43
Warm Box Core Machine #3	1.73	1.0%	0	5.7	0.00	20.43	20.43
High Speed Cont. Sand Mixer	42	1.8%	1.8	2	331.13	367.92	699.05
Total					**435.37**	**536.85**	**972.22**

Note: The resin used in the Warm Box Core Machines reacts under acidic conditions and forms new products that are not VOCs. Therefore, there are no VOC emissions from the resin. Also, the catalyst used in the Warm Box Core Machines contains a maximum of 47.3% VOC, therefore, VOC emissions represent the max. usage * 0.473.

Core Machine	VOC limit (tons/yr)	VOC EF for resin evaparation (lbVOC/lb resin)	VOC Control Efficiency	Core production (ton core/yr)	Catalyst usage limit (lbs/yr)	Resin usage limit (lbs/yr)	Catalyst Limited VOC Emissions (tons/yr)	Resin Limited VOC Emissions (tons/yr)	Total Limited VOC Emissions (tons/yr)
Cold Box Core Machine	N/A	0.05	89.10%	50,808	20,000	160,000	1.09	4	5.09
No Bake Core Machine	38.38	0.05	0.00%	16,945	20,000	80,000	10	2	12
Warm Box Core Machine #1	N/A	0	0.00%	15,155	20,000	100,000	4.73	0	4.73
Warm Box Core Machine #2	N/A	0	0.00%	15,155	20,000	100,000	4.73	0	4.73
Warm Box Core Machine #3	N/A	0	0.00%	15,155	20,000	100,000	4.73	0	4.73
High Speed Cont. Sand Mixer	24.9	0.05	0.00%	13,105	20,000	160,000	10	4	14
Total				**126,322**	**120,000**	**700,000**	**35.28**	**10.00**	**45.28**

Methodology

Uncontrolled VOC Emissions (Resin) (tons/yr) = VOC emission factor x capacity (tons) x 8760/2000
Uncontrolled VOC Emissions (Catalyst) (tons/yr) = maximum catalyst usage x capacity (tons) x 8760/2000

Limited (Catalyst) (tons/yr) = Catalyst usage limit (lbs/yr) x (1-control efficiency) x1/2000
Limited (Resin) (tons/yr) = Resin usage limit (lbs/yr) x 1/2000

Appendix A: Grey Iron Foundry Operations
VOC and HAP Emission Calculations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Material	Solvent Name	Usage Rate (lbs/month)	Weight % VOC	Weight % Naphthalene	Weight % Methanol	Potential VOC Emissions (tons/yr)	Methanol Emissions (tons/yr)
Cold Box Core Making							
Cold Box Parting Spray	Nix Stix 30	100.00	100%	0.00%	0.00%	0.60	0.00
No Bake Core/Mold Making							
No Bake Parting Spray	Refcosolv 3000	100.00	100%	0.00%	0.00%	0.60	0.00
Warm Box Core Making							
Warm Box Parting Spray	Nix Stix 46	100.00	100%	0.00%	0.00%	0.60	0.00
Warm Box Additive	Humidity Additive	300.00	100%	0.00%	0.00%	1.80	0.00
Warm Box Additive	Silane	300.00	75%	0.00%	50.00%	1.35	0.90
Core/Mold Cleaners							
No Bake Cleaner	Refcohol 5522	100.00	100%	0.00%	0.00%	0.00	0.00
No Bake Cleaner	RefcoPart 8000	100.00	100%	0.00%	0.00%	0.00	0.00
Cold Box/Warm Box Cleaner	Metal Cleaner 27	100.00	100%	0.00%	0.00%	0.00	0.00
Cold Box Cleaner	AC Attack	100.00	100%	1.50%	0.00%	0.60	0.00
						5.55	**0.90**

Methodology

Potential VOC Emissions (tons/yr) = Usage rate (lbs/month) x weight % of VOC x 12/2000

Methanol Emissions (tons/yr) = Usage rate (lbs/month) x weight % of methanol x 8760/2000

Appendix A: Grey Iron Foundry Operations
HAP Emission Calculations - Core Making

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Material	Maximum Usage (tons/yr)	Limited Usage (tons/yr)	Weight % Xylenes	Weight % Cumene	Weight % Ethylene Glycol	Weight % Phenol	Weight % Formaldehyde	Weight % Naphthalene	Potential Xylene Emisions (tons/yr)	Potential Cumene Emissions (tons/yr)	Potential Ethylene Glycol Emissions (ton/yr)	Potential Phenol Emissions (tons/yr)	Potential Formaldehyde Emissions (tons/yr)	Potential Naphthalene Emissions (tons/yr)	Total HAPs (tons/yr)
Cold Box Core Making															
Cold Box Resin Part I	459.90	40.00	0.00%	0.00%	0.00%	6.70%	0.20%	1.40%	0.00	0.00	0.00	0.00	0.02	0.21	0.23
Cold Box Resin Part II	438.00	40.00	0.00%	0.00%	0.00%	0.00%	0.00%	1.20%	0.00	0.00	0.00	0.00	0.00	0.17	0.17
Catalyst	71.39	10.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Bake Core/Mold Making															
No-bake Catalyst	40.30	10.00	4.89%	2.09%	0.00%	0.00%	0.00%	0.00%	1.97	0.84	0.00	0.00	0.00	0.00	2.81
No-bake Resin Part I	735.84	20.00	1.80%	0.80%	0.00%	7.50%	0.00%	2.90%	0.77	0.34	0.00	0.00	0.00	1.25	2.37
No-bake Resin Part II	657.00	20.00	0.00%	0.00%	0.00%	0.00%	0.00%	3.20%	0.00	0.00	0.00	0.00	0.00	1.23	1.23
Warm Box Mixer #1 and Core Machine #1															
Resin	242.65	50.00	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00	0.00	0.00	0.00	0.18	0.00	0.18
Catalyst	43.36	10.00	0.00%	0.00%	8.00%	6.00%	0.00%	0.00%	0.00	0.00	3.47	2.60	0.00	0.00	6.07
Warm Box Mixer #2 and Core Machine #2															
Resin	242.65	50.00	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00	0.00	0.00	0.00	0.18	0.00	0.18
Catalyst	43.36	10.00	0.00%	0.00%	8.00%	6.00%	0.00%	0.00%	0.00	0.00	3.47	2.60	0.00	0.00	6.07
Warm Box Mixer #3 and Core Machine #3															
Resin	242.65	50.00	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00	0.00	0.00	0.00	0.18	0.00	0.18
Catalyst	43.36	10.00	0.00%	0.00%	8.00%	6.00%	0.00%	0.00%	0.00	0.00	3.47	2.60	0.00	0.00	6.07
High Speed Cont. Sand Mixer															
No-bake Catalyst	367.92	10.00	4.89%	2.09%	0.00%	0.00%	0.00%	0.00%	17.99	7.69	0.00	0.00	0.00	0.00	25.68
No-bake Resin Part I	319.30	40.00	1.80%	0.80%	0.00%	7.50%	0.00%	2.90%	0.34	0.15	0.00	0.00	0.00	0.54	1.03
No-bake Resin Part II	282.51	40.00	0.00%	0.00%	0.00%	0.00%	0.00%	3.20%	0.00	0.00	0.00	0.00	0.00	0.53	0.53
Reduction Factors for Core Making									**21.07**	**9.03**	**10.41**	**7.81**	**0.56**	**3.93**	**52.80**

Pollutant	Cold Box Release Factor	No-bake Release Factor	Warm Box Release Factor
Phenol	0.00%	0.00%	N/A
Formaldehyde	2.00%	2.00%	5.00%
MDI	0.00%	0.00%	N/A
Polymeric MDI	0.00%	0.00%	N/A
Naphthalene	3.25%	5.85%	N/A
1,2,4 Trimethylbenzene	3.25%	5.85%	N/A
Xylene	3.25%	5.85%	N/A
Cumene	3.25%	5.85%	N/A
Methanol	N/A	N/A	100.00%

METHODOLOGY
HAP Emissions from Resins = Maximum Usage Rate (tons/yr) * % HAP * Reduction Factor (%)
HAP Emissions from Catalysts = Maximum Usage Rate (tons/yr) * % HAP
Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries", and refers to the weight percent of HAP that is emitted to the atmosphere.

Appendix A: Grey Iron Foundry Operations
HAP Emission Calculations - Core Making

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Material	Maximum Usage (tons/yr)	Limited Usage (tons/yr)	Weight % Xylene	Weight % Cumene	Weight % Ethylene Glycol	Weight % Phenol	Weight % Formaldehyde	Weight % Naphthalene	Limited Xylene Emissions (tons/yr)	Limited Cumene Emissions (tons/yr)	Limited Ethylene Glycol Emissions (tons/yr)	Limited Phenol Emissions (tons/yr)	Limited Formaldehyde Emissions (tons/yr)	Limited Naphthalene Emissions (tons/yr)	Total HAPs (tons/yr)
Cold Box Core Making															
Cold Box Resin Part I	459.90	40.00	0.00%	0.00%	0.00%	6.70%	0.20%	1.40%	0.00	0.00	0.00	0.00	0.002	0.02	0.02
Cold Box Resin Part II	438.00	40.00	0.00%	0.00%	0.00%	0.00%	0.00%	1.20%	0.00	0.00	0.00	0.00	0.00	0.02	0.02
Catalyst	71.39	10.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Bake Core/Mold Making															
No-bake Catalyst	40.30	10.00	4.89%	2.09%	0.00%	0.00%	0.00%	0.00%	0.49	0.21	0.00	0.00	0.00	0.00	0.70
No-bake Resin Part I	735.84	20.00	1.80%	0.80%	0.00%	7.50%	0.00%	2.90%	0.02	0.01	0.00	0.00	0.00	0.03	0.06
No-bake Resin Part II	657.00	20.00	0.00%	0.00%	0.00%	0.00%	0.00%	3.20%	0.00	0.00	0.00	0.00	0.00	0.04	0.04
Warm Box Mixer #1 and Core Machine #1															
Resin	242.65	50.00	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Catalyst	43.36	10.00	0.00%	0.00%	8.00%	6.00%	0.00%	0.00%	0.00	0.00	0.80	0.60	0.00	0.00	1.40
Warm Box Mixer #2 and Core Machine #2															
Resin	242.65	50.00	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Catalyst	43.36	10.00	0.00%	0.00%	8.00%	6.00%	0.00%	0.00%	0.00	0.00	0.80	0.60	0.00	0.00	1.40
Warm Box Mixer #3 and Core Machine #3															
Resin	242.65	50.00	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Catalyst	43.36	10.00	0.00%	0.00%	8.00%	6.00%	0.00%	0.00%	0.00	0.00	0.80	0.60	0.00	0.00	1.40
High Speed Cont. Sand Mixer															
No-bake Catalyst	367.92	10.00	4.89%	2.09%	0.00%	0.00%	0.00%	0.00%	0.49	0.21	0.00	0.00	0.00	0.00	0.70
No-bake Resin Part I	319.30	40.00	1.80%	0.80%	0.00%	7.50%	0.00%	2.90%	0.04	0.02	0.00	0.00	0.00	0.07	0.13
No-bake Resin Part II	282.51	40.00	0.00%	0.00%	0.00%	0.00%	0.00%	3.20%	0.00	0.00	0.00	0.00	0.00	0.07	0.07
Reduction Factors for Core Making									**1.04**	**0.45**	**2.40**	**1.80**	**0.11**	**0.25**	**6.05**

Pollutant	Cold Box Release Factor	No-bake Release Factor	Warm Box Release Factor
Phenol	0.00%	0.00%	N/A
Formaldehyde	2.00%	2.00%	5.00%
MDI	0.00%	0.00%	N/A
Polymeric MDI	0.00%	0.00%	N/A
Naphthalene	3.25%	5.85%	N/A
1,2,4 Trimethylbenzene	3.25%	5.85%	N/A
Xylene	3.25%	5.85%	N/A
Cumene	3.25%	5.85%	N/A
Methanol	N/A	N/A	100.00%

METHODOLOGY
HAP Emissions from Resins = Limited Usage Rate (tons/yr) * % HAP * Reduction Factor (%)
HAP Emissions from Catalysts = Limited Usage Rate (tons/yr) * % HAP
Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries", and refers to the weight percent of HAP that is emitted to the atmosphere.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-03
Electric Induction Furnaces

Maximum Throughput TON/HR: 20
Control Device: 39-DC-4
Control Efficiency: 80.00%

TYPE OF MATERIAL: Iron

TON/YR Limited Throughput: 50000.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	0.9	0.86	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year	**78.84**	**75.34**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**4.50**	**4.30**	**0.00**	**0.00**	**0.00**	**0.00**

Note: PM and PM10 emission factors from IDEM approved stack test performed on December 10, 2005. PM and PM10 emissions will be limited to 0.57 and 0.33 lb/ton for melting and charging to render 326 IAC 2-2(PSD) not applicable.
Lead emission factor from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24.

SCC# 3-04-003-15
Charge Handling

Maximum Throughput TON/HR: 20
Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Metal

TON/YR Limited Throughput: 50000.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	0.60	0.36	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year	**52.56**	**31.54**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**15.00**	**9.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-20
A-Line Pouring

Maximum Throughput TON/HR: 24
Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Iron

TON/YR Limited throughput: 50000.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	4.2	2.06	0.02	0.01	0.14	6.00
Potential Uncontrolled Emissions tons/year	**441.50**	**216.55**	**2.10**	**1.05**	**14.72**	**630.72**
Potential Controlled Emissions tons/year	**105.00**	**51.50**	**4380.00**	**2190.00**	**3.50**	**150.00**

Note: PM emission factor from IDEM approved stack test.
All other emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.
CO emission factor based on best available information for CO emissions from pouring, cooling, and shakeout operations. These emissions represent total emissions from A-Line pouring, cooling and shakeout combined

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-25
A-Line Cooling

Maximum Throughput TON/HR: 24

Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Iron

TON/YR Limited Throughput: 50000.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	1.4	1.4	0.0	0.0	0.0	see above
Potential Uncontrolled Emissions tons/year	**147.17**	**147.17**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**35.00**	**35.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-31
A-Line Shakeout

Maximum Throughput TON/HR: 24

Control Device: 36-1-DC-8
Control Efficiency: 89.10%

TYPE OF MATERIAL: Iron

TON/YR Limited Throughput: 50000.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.2	2.24	0.0	0.0	1.2	see above
Potential Uncontrolled Emissions tons/year	**336.38**	**235.47**	**0.00**	**0.00**	**126.14**	**0.00**
Potential Controlled Emissions tons/year	**8.72**	**6.10**	**0.00**	**0.00**	**30.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
A-Line Muller & Sand Handling

Maximum Throughput TON/HR: 200

Control Device: 36-1-DC-8
Control Efficiency: 97.02%

TYPE OF MATERIAL: Sand

TONS/YR Limited Throughput: 464,200

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**3153.60**	**473.04**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**24.90**	**3.73**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-20
B-Line Pouring

Maximum Throughput TON/HR: 9

Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Iron

TONS/YR Limited throughput: 31500.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	4.2	2.06	0.02	0.01	0.14	6.00
Potential Uncontrolled Emissions tons/year	**165.56**	**81.21**	**0.79**	**0.39**	**5.52**	**236.52**
Potential Controlled Emissions tons/year	**66.15**	**32.45**	**0.32**	**0.16**	**2.21**	**94.50**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.
CO emission factor based on best available information for CO emissions from pouring, cooling, and shakeout operations. These emissions represent total emissions from B-Line pouring, cooling and shakeout combined.

SCC# 3-04-003-25
B-Line Cooling

Maximum Throughput TON/HR: 9

Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Iron

TONS/YR Limited Throughput: 31500.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	1.4	1.4	0.0	0.0	0.0	see above
Potential Uncontrolled Emissions tons/year	**55.19**	**55.19**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**22.05**	**22.05**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-31
B-Line Shakeout

Maximum throughput TON/HR: 9

Control Device: 36-1-DC-7
Control Efficiency: 79.20%

TYPE OF MATERIAL: Iron

TONS/YR Limited throughput: 31500.00

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.2	2.24	0.0	0.0	1.2	see above
Potential Uncontrolled Emissions tons/year	**126.14**	**88.30**	**0.00**	**0.00**	**47.30**	**0.00**
Potential Controlled Emissions tons/year	**10.48**	**7.34**	**0.00**	**0.00**	**18.90**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-50
B-Line Muller & Sand Handling

Maximum Throughput TON/HR: 100
Control Device: 36-1-DC-7
Control Efficiency: 97.02%

TYPE OF MATERIAL: Sand

TONS/YR Limited throughput: 130,000.0

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**1576.80**	**236.52**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**6.97**	**1.05**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-20
Floor Pouring

Maximum Throughput TON/HR: 6
Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Iron

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	4.2	2.06	0.02	0.01	0.14	6.00
Potential Uncontrolled Emissions tons/year	**110.38**	**54.14**	**0.53**	**0.26**	**3.68**	**157.68**
Potential Controlled Emissions tons/year	**110.38**	**54.14**	**0.53**	**0.26**	**3.68**	**157.68**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.
CO emission factor based on best available information for CO emissions from pouring, cooling, and shakeout operations. These emissions represent total emissions from Floor pouring, cooling and shakeout combined.

SCC# 3-04-003-25
Floor Cooling

Maximum Throughput TON/HR: 6
Control Device: N/A
Control Efficiency: N/A

TYPE OF MATERIAL: Iron

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	1.4	1.4	0.0	0.0	0.0	see above
Potential Uncontrolled Emissions tons/year	**36.79**	**36.79**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**36.79**	**36.79**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-31
Floor Shakeout

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	N/A
Iron	6	Control Efficiency:	N/A

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.2	2.24	0.0	0.0	1.2	see above
Potential Uncontrolled Emissions tons/year	**84.10**	**58.87**	**0.00**	**0.00**	**31.54**	**0.00**
Potential Controlled Emissions tons/year	**84.10**	**58.87**	**0.00**	**0.00**	**31.54**	**0.00**

Note: PM, PM10 and VOC Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24.

SCC# 3-04-003-31
Floor Knockout

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	8-DC-2
Iron	15	Control Efficiency:	79.20%

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.2	2.24	0.0	0.0	1.2	0.0
Potential Uncontrolled Emissions tons/year	**210.24**	**147.17**	**0.00**	**0.00**	**78.84**	**0.00**
Potential Controlled Emissions tons/year	**43.73**	**30.61**	**0.00**	**0.00**	**78.84**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
High Speed Continuous Sand Mixer & Floor Sand Handling

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	30-DC-6
	42	Control Efficiency:	99.90%
	TONS/YR Limited Throughput		
Sand	42574.00		

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.00	**0.0**
Potential Uncontrolled Emissions tons/year	**662.26**	**99.34**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**0.08**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-50
Cold Box Sand Mixer and sand handling

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	36-1-DC-7
		Control Efficiency:	74.25%
Sand	5.8		

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	**0.54**	0.0	0.0	0.00	0.0
Potential Uncontrolled Emissions tons/year	**91.45**	**13.72**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**23.55**	**3.53**	**0.00**	**0.00**	**0.00**	**0.00**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-40
Shot blast operation-Wheelabrator shot blast machine

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	36-DC-8
	31	Control Efficiency:	97.90%
Iron	TONS/YR Limited Throughput 50000.00		

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	17.0	1.70	0.0	0.0	0.00	0.0
Potential Uncontrolled Emissions tons/year	**2308.26**	**230.83**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**8.93**	**0.89**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
No Bake large & small core mixer and sand handling

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	36-1-DC-7
	6	Control Efficiency:	74.25%
Sand			

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.00	0.0
Potential Uncontrolled Emissions tons/year	**94.61**	**14.19**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**24.36**	**3.65**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-50
Warm Box Mixer 1

Maximum Throughput TON/HR: 3.5

Control Device: 36-1-DC-7
Control Efficiency: 74.25%

TYPE OF MATERIAL: sand

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**55.19**	**8.28**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**14.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
Warm Box Mixer 2

Maximum Throughput TON/HR: 1.5

Control Device: 36-1-DC-6
Control Efficiency: 74.25%

TYPE OF MATERIAL: Sand

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**23.65**	**3.55**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**6.09**	**0.91**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
Warm Box Line sand Hopper

Maximum Throughput TON/HR: 5

Control Device: 36-1-DC-7
Control Efficiency: 74.25%

TYPE OF MATERIAL: sand

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**78.84**	**11.83**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**20.30**	**3.05**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-40
Chill Iron Shotblasting Operation

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	8-DC-2
		Control Efficiency:	98.01%
Iron	1.75		

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	17.0	1.7	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**130.31**	**13.03**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**2.59**	**0.26**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-03-024-01
New Scrap Handling - Crusher

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	39-DC-5
		Control Efficiency:	89.91%
Metal	15		

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	0.5	0.05	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year	**32.85**	**3.29**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**3.31**	**0.33**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-31
Scrap Handling - Rotary Reclaimer

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	36-DC-5
		Control Efficiency:	98.90%
Metal	15		

	PM lbs/ton metal charged	PM_{10} lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
	3.2	2.24	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year	**210.24**	**147.17**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**2.31**	**1.62**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-50
Raw Sand Storage Silo

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	39-DC-5
Sand	10	Control Efficiency:	98.90%

TONS/YR Limited Throughput: 42574.00

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**157.68**	**23.65**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**0.84**	**0.13**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
Spent Sand Storage Silo

TYPE OF MATERIAL	Maximum Throughput TONS/HR	Control Device:	39-DC-5
Sand	10	Control Efficiency:	98.90%

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**157.68**	**23.65**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**1.73**	**0.26**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
Sand Conveyor

TYPE OF MATERIAL	Maximum Throughput TONS/HR	Control Device:	39-DC-5
Sand	10	Control Efficiency:	89.91%

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**157.68**	**23.65**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year		**2.39**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Grey Iron Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

SCC# 3-04-003-50
No Bake Line Sand and Hopper

TYPE OF MATERIAL	Maximum Throughput TON/HR	Control Device:	36-1-DC-7
Sand	6	Control Efficiency:	74.25%

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**94.61**	**14.19**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**24.36**	**3.65**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

SCC# 3-04-003-50
Cold Box Line Sand hopper and elevator

TYPE OF MATERIAL	Maximum Throughput TONS/HR	Control Device:	36-1-DC-7
Sand	6	Control Efficiency:	74.25%

	PM lbs/ton sand handled	PM_{10} lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**91.45**	**13.72**	**0.00**	**0.00**	**0.00**	**0.00**
Potential Controlled Emissions tons/year	**23.55**	**3.53**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.

Appendix A: Emission Calculations
HAP Emissions from Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Process	Maximum Rate (tons iron/hr)	Limited Rate** (tons iron/hr)	PM emission factor lb/ton	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Eac (ton/yr)	Control Device	Control Efficiency (%)
Charge Handling	20	5.71	0.60	chromium	0.00023	0.020	0.006	N/A	
SCC# 3-04-003-15				nickel	0.00040	0.035	0.010		
AP-42 Ch. 12.10				arsenic	0.00008	0.007	0.002		
				Lead	0.00231	0.202	0.058		
				Manganese	0.01860	1.629	0.465		
				Antimony	0.00111	0.097	0.028		
				TOTAL	**0.02273**	**1.99**	**0.57**		
Melting - Electric	20	5.71	0.68	chromium	0.00026	0.023	0.001	39-DC-4	80.00%
Induction Furnaces*			stack test	nickel	0.00046	0.040	0.002	39-DC-4	80.00%
EPA SCC# 3-04-003-03				arsenic	0.00009	0.008	0.000	39-DC-4	80.00%
AP-42 Ch. 12.10				Lead	0.05450	4.774	0.273	39-DC-4	80.00%
				Manganese	0.02108	1.847	0.105	39-DC-4	80.00%
				Antimony	0.00126	0.110	0.006	39-DC-4	80.00%
				TOTAL	**0.07764**	**6.80**	**0.39**		
A-Line Pouring	24.0	4.00	1.00	chromium	0.00038	0.040	0.007	N/A	
SCC# 3-04-003-18			stack test	nickel	0.00067	0.070	0.012		
				arsenic	0.00013	0.014	0.002		
				Lead	0.00385	0.405	0.067		
				Manganese	0.03100	3.259	0.543		
				Antimony	0.00185	0.194	0.032		
				TOTAL	**0.03788**	**3.98**	**0.66**		
A-Line Cooling	24.0	4.00	1.40	chromium	0.00053	0.056	0.009	N/A	
SCC# 3-04-003-18				nickel	0.00094	0.099	0.016		
				arsenic	0.00018	0.019	0.003		
				Lead	0.00539	0.567	0.094		
				Manganese	0.04340	4.562	0.760		
				Antimony	0.00259	0.272	0.045		
				TOTAL	**0.05303**	**5.57**	**0.93**		
A-Line Shakeout	24.0	4.00	3.20	chromium	0.00122	0.128	0.002	36-1-DC-8	89.10%
SCC# 3-04-003-31				nickel	0.00214	0.225	0.004	36-1-DC-8	89.10%
AP-42 Ch. 12.10				arsenic	0.00042	0.044	0.001	36-1-DC-8	89.10%
				Lead	0.01232	1.295	0.024	36-1-DC-8	89.10%
				Manganese	0.09920	10.428	0.189	36-1-DC-8	89.10%
				Antimony	0.00592	0.622	0.011	36-1-DC-8	89.10%
				TOTAL	**0.12122**	**12.74**	**0.23**		
B-Line Pouring	9.0	1.14	4.20	chromium	0.00160	0.063	0.008	N/A	
SCC# 3-04-003-18				nickel	0.00281	0.111	0.014		
				arsenic	0.00055	0.022	0.003		
				Lead	0.01617	0.637	0.081		
				Manganese	0.13020	5.132	0.651		
				Antimony	0.00777	0.306	0.039		
				TOTAL	**0.15910**	**6.27**	**0.80**		
B-Line Cooling	9.0	1.14	1.40	chromium	0.00053	0.021	0.003	N/A	
SCC# 3-04-003-18				nickel	0.00094	0.037	0.005		
				arsenic	0.00018	0.007	0.001		
				Lead	0.00539	0.212	0.027		
				Manganese	0.04340	1.711	0.217		
				Antimony	0.00259	0.102	0.013		
				TOTAL	**0.05303**	**2.09**	**0.27**		
B-Line Shakeout	9.0	1.14	3.20	chromium	0.00122	0.048	0.001	36-1-DC-7	79.20%
SCC# 3-04-003-31				nickel	0.00214	0.085	0.002	36-1-DC-7	79.20%
AP-42 Ch. 12.10				arsenic	0.00042	0.016	0.000	36-1-DC-7	79.20%
				Lead	0.01232	0.486	0.013	36-1-DC-7	79.20%
				Manganese	0.09920	3.910	0.103	36-1-DC-7	79.20%
				Antimony	0.00592	0.233	0.006	36-1-DC-7	79.20%
				TOTAL	**0.12122**	**4.78**	**0.13**		
Floor Pouring	6.0	0.57	4.20	chromium	0.00160	0.042	0.004	N/A	
SCC# 3-04-003-18				nickel	0.00281	0.074	0.007		
				arsenic	0.00055	0.014	0.001		
				Lead	0.01617	0.425	0.040		
				Manganese	0.13020	3.422	0.326		
				Antimony	0.00777	0.204	0.019		
				TOTAL	**0.15910**	**4.18**	**0.40**		
Floor Cooling	6.0	0.57	1.40	chromium	0.00053	0.014	0.001	N/A	
SCC# 3-04-003-18				nickel	0.00094	0.025	0.002		
				arsenic	0.00018	0.005	0.000		
				Lead	0.00539	0.142	0.013		
				Manganese	0.04340	1.141	0.109		
				Antimony	0.00259	0.068	0.006		
				TOTAL	**0.05303**	**1.39**	**0.13**		

Appendix A: Emission Calculations
HAP Emissions from Foundry Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Process	Maximum Rate (tons iron/hr)	Limited Rate** (tons iron/hr)	PM emission factor lb/ton	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Eac (ton/yr)	Control Device	Control Efficiency (%)
Floor Shakeout	6.0	0.57	3.20	chromium	0.00122	0.032	0.003	N/A	
SCC# 3-04-003-31				nickel	0.00214	0.056	0.005		
AP-42 Ch. 12.10				arsenic	0.00042	0.011	0.001		
				Lead	0.01232	0.324	0.031		
				Manganese	0.09920	2.607	0.248		
				Antimony	0.00592	0.156	0.015		
				TOTAL	**0.12122**	**3.19**	**0.30**		
Floor Knockout	15.0	0.57	3.20	chromium	0.00122	0.080	0.001	8-DC-2	79.20%
SCC# 3-04-003-31				nickel	0.00214	0.141	0.001	8-DC-2	79.20%
AP-42 Ch. 12.10				arsenic	0.00042	0.027	0.000	8-DC-2	79.20%
				Lead	0.01232	0.809	0.006	8-DC-2	79.20%
				Manganese	0.09920	6.517	0.052	8-DC-2	79.20%
				Antimony	0.00592	0.389	0.003	8-DC-2	79.20%
				TOTAL	**0.12122**	**7.96**	**0.06**		
Scrap Handling	15	4.57	3.2	chromium	0.00122	0.080	0.000	39-DC-5	98.90%
Rotary Reclaimer				nickel	0.00214	0.141	0.000	39-DC-5	98.90%
SCC# 3-04-003-31				arsenic	0.00042	0.027	0.000	39-DC-5	98.90%
AP-42 Ch. 12.10				Lead	0.01232	0.809	0.003	39-DC-5	98.90%
				Manganese	0.09920	6.517	0.022	39-DC-5	98.90%
				Antimony	0.00592	0.389	0.001	39-DC-5	98.90%
				TOTAL	**0.12122**	**7.96**	**0.03**		
Wheelabrator Shot Blast	31	5.71	17.00	chromium	0.00646	0.877	0.003	36-DC-8	97.90%
SCC# 3-04-003-40				nickel	0.01139	1.547	0.006	36-DC-8	97.90%
AP-42 Ch. 12.10				arsenic	0.00221	0.300	0.001	36-DC-8	97.90%
				Lead	0.06545	8.887	0.034	36-DC-8	97.90%
				Manganese	0.52700	71.556	0.277	36-DC-8	97.90%
				Antimony	0.03145	4.270	0.017	36-DC-8	97.90%
				TOTAL	**0.64396**	**87.44**	**0.34**		
Chill Iron Shot Blast	1.75	0.11	17.00	chromium	0.00646	0.050	0.000	8-DC-2	98.01%
SCC# 3-04-003-40				nickel	0.01139	0.087	0.000	8-DC-2	98.01%
AP-42 Ch. 12.10				arsenic	0.00221	0.017	0.000	8-DC-2	98.01%
				Lead	0.06545	0.502	0.001	8-DC-2	98.01%
				Manganese	0.52700	4.039	0.005	8-DC-2	98.01%
				Antimony	0.03145	0.241	0.000	8-DC-2	98.01%
				TOTAL	**0.64396**	**4.94**	**0.006**		

* Note: HAP emission factors for the electric induction furnaces are based on the PM emission factor from IDEM approved stack test performed on December 10, 2005 and percent of PM that is HAP based on information from SPECIATE, v 3.1. Lead emission factor from FIRE version 6.24.
**Limited metal throughput rates are not all included as limits in the permit. They are based on information from Weil-McLain on actual throughputs and are used to establish the HAP emission limits in the permit in tons/yr.
HAP emission factors for A-Line pouring are based on PM emission factor used in Title V permit from previous in-house stack test and the percent of PM that is HAP based on information from SPECIATE, v 3.1.
All other HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1.

USEPA Speciate v 3.1 Data	
Metal	Gen. Foundry
Manganese	3.100%
Chromium	0.038%
Nickel	0.067%
Arsenic	0.013%
Antimony	0.185%
Lead	0.385%

Total Potential Emissions Before Controls

chromium	1.57	tons/year
nickel	2.77	tons/year
arsenic	0.54	tons/year
Lead	20.48	tons/year
Manganese	128.28	tons/year
Antimony	7.66	tons/year
Total	**161.29**	**tons/year**

Total Limited Emissions After Controls

	0.05	tons/year
	0.09	tons/year
	0.02	tons/year
	0.76	tons/year
	4.07	tons/year
	0.24	tons/year
	5.23	**tons/year**

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-effiency/100) x Ebc
1 lb = 2000 tons

Appendix A: Grey Iron Foundry Operations
Potential HAP Emission Calculations - Pouring, Cooling and Shakeout

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Material	Maximum Usage (tons/yr)	Acrolein EF (lb/lb)	Benzene EF (lb/lb)	Formaldehyde EF (lb/lb)	Hydrogen Cyanide EF (lb/lb)	Xylenes EF (lb/lb)	Naphthalene EF (lb/lb)	Phenol EF (lb/lb)	Toluene EF (lb/lb)	Aromatic Amines EF (lb/lb)	Aldehydes EF (lb/lb)	Potential Acrolein Emissions (tons/yr)	Potential Benzene Emissions (tons/yr)	Potential Formaldehyde Emissions (tons/yr)	Potential HCN Emissions (ton/yr)	Potential Xylenes Emissions (tons/yr)	Potential Naphthalene Emissions (tons/yr)	Potential Phenol Emissions (ton/yr)	Potential Toluene Emissions (tons/yr)	Potential Aromatic Amines Emissions (tons/yr)	Potential Aldehyde Emissions (tons/yr)	Total HAPs (tons/yr)
Cold Box Core Making - A & B Lines Pouring, Cooling and Shakeout																						
Cold Box Resin Part I and Part II	897.90	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.00035	0.000219	0.028	4.805	0.020	0.945	0.513	0.020	3.505	0.748	0.315	0.197	11.095
No Bake Core/Mold Making - Floor Pouring, Cooling and Shakeout																						
No-bake Resin Part I and Part I	1392.84	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.00035	0.000219	0.043	7.453	0.031	1.467	0.795	0.031	5.438	1.160	0.489	0.305	17.211
High Speed Cont. Sand Mixer - Floor Pouring, Cooling and Shakeout																						
No-bake Resin Part I and Part I	601.81	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.00035	0.000219	0.019	3.220	0.013	0.634	0.344	0.013	2.349	0.501	0.211	0.132	7.437
Green Sand Molding - A Line Pouring, Cooling and Shakeout																						
Seacoa	1,000.00	0.000002	0.000611	0.000004	0.000118	0.000042	0.000021	0.000131	0.000063	2.1E-05	0.000063	0.002	0.611	0.004	0.118	0.042	0.021	0.131	0.063	0.021	0.063	1.076
Green Sand Molding - B Line Pouring, Cooling and Shakeout																						
Seacoa	325.00	0.000002	0.000611	0.000004	0.000118	0.000042	0.000021	0.000131	0.000063	2.1E-05	0.000063	0.001	0.199	0.001	0.038	0.014	0.007	0.043	0.020	0.007	0.020	0.350
																				Total Emissions		37.17

METHODOLOGY
Emission factors from the 1994 Modern Casting article titled "Calculating Emission Factors for Pouring, Cooling and Shakeout" by Gary Mosher.
HAP Emissions = Limited Resin Usage Rate (tons/yr) * 2000 lbs/ton * EF (lb/lb) * 1 tons/2000 lbs

Appendix A: Grey Iron Foundry Operations
Limited HAP Emission Calculations - Pouring, Cooling and Shakeout

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Material	Limited usage (tons/yr)	Acrolein EF (lb/lb)	Benzene EF (lb/lb)	Formaldehyde EF (lb/lb)	Hydrogen Cyanide EF (lb/lb)	Xylenes EF (lb/lb)	Naphthalene EF (lb/lb)	Phenol EF (lb/lb)	Toluene EF (lb/lb)	Total Aromatic Amines EF (lb/lb)	Total Aldehydes EF (lb/lb)	Limited Acrolein Emissions (tons/yr)	Limited Benzene Emissions (tons/yr)	Limited Formaldehyde Emissions (ton/yr)	Limited HCN Emissions (tons/yr)	Limited Xylenes Emissions (tons/yr)	Limited Naphthalene Emissions (tons/yr)	Limited Phenol Emissions (tons/yr)	Limited Toluene Emissions (tons/yr)	Limited Aromatic Amines Emissions (tons/yr)	Limited Aldehyde Emissions (tons/yr)	Total Limited HAPs (tons/yr)
Cold Box Core Making - A & B Lines Pouring, Cooling and Shakeout																						
Cold Box Resin Part I and Part II	80.00	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.00035	0.000219	0.002	0.428	0.002	0.084	0.046	0.002	0.312	0.067	0.028	0.018	0.989
No Bake Core/Mold Making - Floor Pouring, Cooling and Shakeout																						
No-bake Resin Part I and Part II	40.00	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.00035	0.000219	0.001	0.214	0.001	0.042	0.023	0.001	0.156	0.033	0.014	0.009	0.494
High Speed Cont. Sand Mixer - Floor Pouring, Cooling and Shakeout																						
No-bake Resin Part I and Part II	80.00	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.00035	0.000219	0.002	0.428	0.002	0.084	0.046	0.002	0.312	0.067	0.028	0.018	0.989
Green Sand Molding - A Line Pouring, Cooling and Shakeout																						
Seacoal	1,000.00	0.000002	0.000611	0.000004	0.000118	0.000042	0.000021	0.000131	0.000063	2.1E-05	0.000063	0.002	0.611	0.004	0.118	0.042	0.021	0.131	0.063	0.021	0.063	1.076
Green Sand Molding - B Line Pouring, Cooling and Shakeout																						
Seacoal	325.00	0.000002	0.000611	0.000004	0.000118	0.000042	0.000021	0.000131	0.000063	2.1E-05	0.000063	0.001	0.199	0.001	0.038	0.014	0.007	0.043	0.020	0.007	0.020	0.350
																				Total Emissions		3.90

METHODOLOGY
Emission factors from the 1994 Modern Casting article titled "Calculating Emission Factors for Pouring, Cooling and Shakeout" by Gary Mosher.
HAP Emissions = Limited Resin Usage Rate (tons/yr) * 2000 lbs/ton * EF (lb/lb) * 1 tons/2000 lbs

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date 15-Aug-2007

Material	Process	Density (lb/gal)	Weight % Volatile (H_20 & Organics)	Weight % Water	Weight % Organics	Volume % water	Volume % Non-Vol (Solids)	Gal of Mat (gal/hr)	Pounds VOC Per gallon of coating less water	Pounds VOC per gallon of coating	Uncontrolled VOC (tons/yr)	Particulate Matter (tons/yr)	Transfer Efficiency (%)
Black Paint	Spray Booth	8.42	72.31%	55.7%	16.6%	56.2%	24.00%	1.15300	3.20	1.40	7.07	2.94	75%
Butyl Cellosolve Solvent	Spray Booth	7.53	100.00%	0.0%	100.0%	0.0%	0.00%	0.00114	7.53	7.53	0.04	0.00	75%
Gray Paint	Dip Tank	10.05	58.59%	46.6%	12.0%	56.1%	26.99%	0.57711	2.75	1.21	3.06	0.00	100%
							Total Potential Emissions:				**10.17**	**2.94**	

	Control eff. PM (Spray Booth)	Uncontrolled VOC tons per Year	Controlled PM tons/yr
Total Controlled Emissions:	90.00%	**10.17**	**0.29**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

**There are no HAPs contained in any of the above coatings.

Appendix A: Emission Calculations
Single HAP Emission Limits for HAPs with Unrestricted PTE Greater Than 10 Tons Per Year and Combined HAP Emission Limits

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Unrestricted HAP emissions (tons/yr)

Unit	Lead	Manganese	Xylene	Ethylene Glycol	Phenol	Benzene	Total Metal HAPs*	Total Organic HAPs*
Furnaces	4.774	1.847					6.8	0
Charge Handling	0.202	1.629					1.99	0
A-Line P, C & S	2.267	18.249	0.569		3.571	5.111	22.29	12.521
B-Line P, C & S	1.335	10.753					13.14	
Floor P, C & S & Kn	1.7	13.687	1.139		7.787	10.673	16.72	24.648
High Speed Mixer			18.33				0	27.24
Cold Box Core making							0	0.4
No Bake Core making			2.74				0	6.4
Warm Box Core making				10.41	7.8		0	19.65
Wheelabrator shot blast	8.887	71.556					87.44	0
Scrap rotary reclaimer	0.809	6.517					7.96	0
Chill Iron shot blast	0.502	4.039					4.94	0
Preheater	2.84E-05	2.16E-05				1.19E-04	3.12E-04	0.107
Surface coating							0	0
Emergency generators			5.17E-04			1.69E-03	0	0.0231
Afterburner	3.07E-06	2.33E-06				1.29E-05	3.36E-05	0.0115
Total	**20.48**	**128.28**	**22.78**	**10.41**	**19.16**	**15.79**	**161.28**	**91.00**

Total HAPs **252.28**

*Note: Total metal HAPs and total organic HAPs include HAPs listed above and all other HAPs emitted at each emission unit not shown here.

Limited HAP emissions (tons/yr)

Unit	Limited metal throughput used as basis for limit (tons)	Limited Resin and/or Catalyst throughput used as basis for limit (lbs)	Limited seacoal throughput used as basis for limit (lbs)	Lead	Manganese	Xylene	Ethylene Glycol	Phenol	Benzene	Total Metal HAPs	Total Organic HAPs
Furnaces	50,000			2.32	0.66					2.43	0.00
Charge Handling	50,000			0.10	0.47					0.57	0.00
A-Line P, C & S	35,000	160,000 (resin)	2,000,000	1.10	3.04	0.569		1.85	2.41	3.71	2.41
B-Line P, C & S	10,000		650,000	0.65	1.36					1.67	
Floor P, C & S & Kn	5,000	240,000 (resin)		0.83	0.93	1.14		1.48	1.48	1.14	1.48
High Speed Mixer		160,000 (res) 20,000 (cat)				0.90				0.00	0.90
Cold Box Core making		160,000 (resin)								0.00	0.40
No Bake Core making		80,000 (res) 20,000 (cat)				0.80				0.00	0.80
Warm Box Core making		300,000 (res) 60,000 (cat)					5.22	4.03		0.00	5.22
Wheelabrator shot blast	50,000			3.52	3.00					3.52	0.00
Scrap rotary reclaimer	40,000			0.32	0.27					0.32	0.00
Surface coating	N/A				0.00					0.00	0.00
Chill Iron shot blast	1,000			0.20	0.17					0.20	0.00
Preheater	N/A			2.84E-05	2.16E-05				1.19E-04	3.12E-04	0.107
Emergency generators	N/A					5.17E-04			1.69E-03	0	0.0231
Afterburner	N/A			3.07E-06	2.33E-06				1.29E-05	3.36E-05	0.01
Total				**9.03**	**9.90**	**3.41**	**5.22**	**7.36**	**3.89**	**13.55**	**11.36**

Total HAPs **24.91**

Appendix A Emission Calculation
Insignificant Activities (Grinding and machining Opreation)
Uncontrolled Emissions
Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Particulate Emissions (tons/yr)			
	Grain Loading (gr/dscf)	Air Flow Rate (scfm)	PM/PM_{10} Emissions (tons/yr)
Emission Unit			
Grinding and Machining	0.03	4000	4.51

Methodology
Uncontrolled PM/PM_{10} Emissions (tons/yr) = Grain Loading (gr/dscf) x Air Flow rate (scfm) x 60 min/hr x lb/7000 x 8760/2000

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
15.80	138.4

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.13	0.53	0.04	6.9	0.4	5.8

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 26 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.453E-04	8.304E-05	5.190E-03	1.246E-01	2.353E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.460E-05	7.612E-05	9.689E-05	2.630E-05	1.453E-04

Methodology is the same as page 25.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.4	12.3

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.01	0.05	0.00	0.6	0.03	0.5

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 28 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.288E-05	7.358E-06	4.599E-04	1.104E-02	2.085E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.066E-06	6.745E-06	8.585E-06	2.330E-06	1.288E-05

Methodology is the same as page 27.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Emergency Generator (>600 HP)

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

Heat Input Capacity Horsepower (hp)	Potential Throughput hp-hr/yr		S=	0.5	= WEIGHT % SULFUR
2850.0	1425000.0	Hours* of operation =		500	

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0007	0.00070	0.0040	0.012	0.00071	0.00550
			(.00809S)	**see below		
Potential Emission in tons/yr	0.5	0.5	2.9	8.5	0.5	3.9

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr
As certified by EPA for 2DDXL65.0GTE engine = 0.012 lb/hp-hr
Note that the PM and PM10 emission factor in lb/hp-hr are the same.
An average conversion factor of 1hp-hr = 7,000Btu is provided below.

Methodology

Potential Througput (hp-hr/yr) = hp * hr/yr

Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1 and Table 3.4-2
1 hp-hr = 7000 Btu, AP42 (Supplement B 10/96), Table 3.3-1, Footnote a.
Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

Appendix A: Emissions Calculations
Unpaved Roads

Company Name: Weil McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360
Permit Number: T091-24543-00020
Reviewer: Josiah Balogun
Date: 15-Aug-2007

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8,760 hours of use and AP-42, Ch 11.2.1.

Semi-Tractor Trailers

0.125	trip/hr x	
0.1	mile/trip x	
2	(round trip) x	
8,760	hr/yr =	219 miles per year

Ef =	k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)	
=	4.03	lb/mile
where k =	0.8	size multiplier)
s =	4.8	% silt content of unpaved roads
p =	125	days of rain greater than or equal to 0.01 inches
S =	10	miles/hr vehicle speed
W =	27	tons average vehicle weight
w =	18	wheels

PM: 4.03 lb/mi x 219 mi/yr = / 2000 lb/ton = **0.44 tons/yr**

P M-10: 35% of PM = **0.15 tons/yr**