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: July 8, 2009

RE: Kingsbury Castings Division / 091 - 25086 - 00078

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:

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

Part 70 Operating Permit
OFFICE OF AIR QUALITY

Kingsbury Castings Division
3232 3rd Road Annex, Kingsbury Industrial Park
Kingsbury, Indiana 46345

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

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

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

Operation Permit No.: T 091-25086-00078	
Issued by: Donald F. Robin Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality	Issuance Date: July 8, 2009 Expiration Date: July 8, 2014

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary ductile iron foundry.

Source Address:	3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, Indiana 46345
Mailing Address:	P.O. Box 639, LaPorte, Indiana 46352
General Source Phone Number:	219-362-8531
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, under Section 112 of the Clean Air Act 1 of 28 Source Categories

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

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) scrap and charge handling process, constructed in 1970, not exhausting through a stack, with a capacity of 4.95 tons of metal per hour.

(b) One (1) natural gas-fired scrap charge preheater, identified as HEAT2, constructed in 1976, exhausting through stack 2, with a heat input capacity of 2.2 million British thermal units per hour.

(c) Two (2) electric induction furnaces, identified as FRN03 and FRN04, constructed in 2000, equipped with an optional fabric filter (K4) and exhausting through stack K4 and general building exhausts A and B, with a maximum charge rate of 4.95 tons of metal per hour, total.

(d) Four (4) natural gas-fired ladle heaters, exhausting through the general building ventilation, with a heat input capacity of 2.7 million British thermal units per hour, total.

(e) Magnesium treatment operations, operating since 1974, exhausting through general building exhausts A, B, 6, and 7, with a capacity of 4.95 tons of metal per hour.

(f) One (1) pouring and cooling line, identified as Power & Free, constructed in 1990 and modified in 2004, exhausting through stacks 1 through 5, 10, and 32, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

(g) One (1) manual shakeout and degating operation, constructed in 1980 and relocated in 1994 and 2006, equipped with a shaker conveyor collector (K14), with the ability to exhaust inside or through stack K14, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

(h) One (1) automated shakeout machine, constructed in 2006, equipped with a cartridge dust collector for particulate control, with the ability to exhaust inside or through stack K13, with a capacity of 4.95 tons of metal and 4.95 tons of sand per hour.

(i) One (1) shotblast machine, identified as WHE02, constructed in 1983, controlled by an integral dust collector (K1) and exhausting inside the building, with a capacity of 4.95 tons of castings per hour.

(j) One (1) cutoff saw, identified as SAW03, constructed in 1970, equipped with an optional fabric filter (K3) and exhausting inside the building, with a capacity of 4.95 tons of metal per hour.

(k) One (1) sand handling operation, constructed in 1970, including nine (9) sand silos, belt conveyors, pneumatic conveyors and fork lifts, controlled by one (1) dust collector (K13) and eight (8) bin vent filters (K5, K6, K7, K8, K9, K10, K11 and K12), with the ability to exhaust inside or through stack K13, with a capacity of 4.95 tons of sand per hour.

(l) Twenty (20) shell molding machines, identified as MOL01 through MOL020, two (2) constructed in 1970, two (2) constructed in 1974, one (1) constructed in 1975, one (1) constructed in 1978, one (1) constructed in 1980, two (2) constructed in 1983, two (2) constructed in 1986, two (2) constructed in 1992, two (2) constructed in 1993, four (4) constructed in 1995, and one (1) constructed in 1999, each equipped with a natural gas-fired heater, exhausting through stacks 13, 14, 17, 15, 16, and 26, using a release agent with no VOC, each with a capacity of 700 pounds of pre-coated sand per hour, each using 33.25 pounds of binder per hour, and each heater with a capacity of 1.0 million British thermal unit per hour.

(m) Twelve (12) shell core machines:

(1) Eight (8) shell core machines, identified as COR01 through COR08, two (2) constructed in 1974, one (1) constructed in 1979, one (1) constructed in 1980, two (2) constructed in 1983, and two (2) constructed in 1999, each equipped with a natural gas-fired heater, exhausting through stacks 18 and 30, using a release agent with no VOC, each with a capacity of 225 pounds of pre-coated sand per hour, each using 10.69 pounds of binder per hour, and each heater with a capacity of 0.22 million British thermal units per hour; and

(2) Four (4) shell core machines, identified as COR09 through COR12, constructed in 2006, each equipped with a natural gas-fired heater, exhausting through stacks 18 and 30, each with a capacity of 300 pounds of sand per hour, each using 14.25 pounds of binder per hour, and each heater with a capacity of 0.22 million British thermal units per hour.

(n) Truck loading and unloading, maximum throughput: 4.95 tons of sand per hour.

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

This stationary source consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including thirty-six (36) space heaters with a total capacity of 15.851 million British thermal units per hour.

(b) Combustion source flame safety purging on startup.

(c) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(d) Refractory storage not requiring air pollution control equipment.

(e) Machining where an aqueous cutting coolant continuously floods the machining interface.

(f) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, including two (2) cold cleaner degreasers, constructed in 1970, using less than five percent (5%) halogenated solvents by weight.

(g) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38°C (100°F); or

(2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(h) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(i) Closed loop heating and cooling systems.

(j) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(k) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.

(l) Noncontact cooling tower systems with either of the following:

Forced and induced draft cooling tower system not regulated under a NESHAP.

(m) Heat exchanger cleaning and repair.

(n) Paved and unpaved roads and parking lots with public access.

(o) Asbestos abatement projects regulated by 326 IAC 14-10.

(p) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(q) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38°C).

(r) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(s) Farm operations.

(t) One (1) sand pile, maximum input: 15,242 tons of loose sand per year.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T 091-25086-00078, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require 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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(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 Northwest 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267**.**

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require 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. Any emergencies that have been previously reported pursuant to paragraph (b)(5) of this condition and certified by a "responsible official" need only referenced by the date of the original 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 T 091-25086-00078 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 combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

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

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

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

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

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified 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]

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

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

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

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

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

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

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

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

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

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

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

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

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

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

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

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

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

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

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, 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). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification 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 Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

C.7 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require 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.8 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.9 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 or ninety (90) days of initial start-up, whichever is later. 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The notification which shall be submitted by the Permittee does require 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.10 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.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

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

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

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

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

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

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 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.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. 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 or ninety (90) days of initial start-up, whichever is later.

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

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

(d) 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) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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 (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

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

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

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

(4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

(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.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with 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) scrap and charge handling process, constructed in 1970, not exhausting through a stack, with a capacity of 4.95 tons of metal per hour.

(b) One (1) natural gas-fired scrap charge preheater, identified as HEAT2, constructed in 1976, exhausting through stack 2, with a heat input capacity of 2.2 million British thermal units per hour.

(c) Two (2) electric induction furnaces, identified as FRN03 and FRN04, constructed in 2000, equipped with an optional fabric filter (K4) and exhausting through stack K4 and general building exhausts A and B, with a maximum charge rate of 4.95 tons of metal per hour, total.

(d) Magnesium treatment operations, operating since 1974, exhausting through general building exhausts A, B, 6, and 7, with a capacity of 4.95 tons of metal per hour.

(e) One (1) pouring and cooling line, identified as Power & Free, constructed in 1990 and modified in 2004, exhausting through stacks 1 through 5, 10, and 32, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

(f) One (1) manual shakeout and degating operation, constructed in 1980 and relocated in 1994 and 2006, equipped with a shaker conveyor collector (K14), with the ability to exhaust inside or through stack K14, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

(g) One (1) automated shakeout machine, constructed in 2006, equipped with a cartridge dust collector for particulate control, with the ability to exhaust inside or through stack K13, with a capacity of 4.95 tons of metal and 4.95 tons of sand per hour.

(h) One (1) shotblast machine, identified as WHE02, constructed in 1983, controlled by an integral dust collector (K1) and exhausting inside the building, with a capacity of 4.95 tons of castings per hour.

(i) One (1) sand handling operation, constructed in 1970, including nine (9) sand silos, belt conveyors, pneumatic conveyors and fork lifts, controlled by one (1) dust collector (K13) and eight (8) bin vent filters (K5, K6, K7, K8, K9, K10, K11 and K12), with the ability to exhaust inside or through stack K13, with a capacity of 4.95 tons of sand per hour.

(j) Twenty (20) shell molding machines, identified as MOL01 through MOL020, two (2) constructed in 1970, two (2) constructed in 1974, one (1) constructed in 1975, one (1) constructed in 1978, one (1) constructed in 1980, two (2) constructed in 1983, two (2) constructed in 1986, two (2) constructed in 1992, two (2) constructed in 1993, four (4) constructed in 1995, and one (1) constructed in 1999, each equipped with a natural gas-fired heater, exhausting through stacks 13, 14, 17, 15, 16, and 26, using a release agent with no VOC, each with a capacity of 700 pounds of pre-coated sand per hour, each using 33.25 pounds of binder per hour, and each heater with a capacity of 1.0 million British thermal unit per hour.

(k) Truck loading and unloading, maximum throughput: 4.95 tons of sand per hour.

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

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

D.1.1 Minor Limits for PM, PM_{10}, CO, and VOC [326 IAC 2-2] [326 IAC 8-1-6]

(a) In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

(1) The total metal melt rate shall not exceed 24,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) PM_{10} emissions from the two (2) EIFs (FRN03 and FRN04) shall not exceed 1.24 lb PM_{10}/ton metal.

(3) The PM, PM_{10}, and CO emissions from pouring and cooling (Power & Free) shall not exceed 1.60 lb PM/ton metal, 2.40 lb PM_{10}/ton metal, and 12.45 lb CO/ton metal, respectively.

(4) The CO emissions from the automated shakeout unit shall not exceed 6.22 lb CO/ton metal.

(5) The PM and PM_{10} emissions from Stack K13, controlling the automated shakeout unit and sand handling system shall not exceed 1.83 lb PM/ton metal and 1.00 lb PM_{10}/ton metal, respectively.

(6) The VOC emissions from the manual shakeout unit and the automated shakeout unit shall not exceed 1.20 lb VOC/ton, each.

Compliance with the above limits, combined with the potential to emit of other units associated with the respective modifications, shall limit the potential to emit PM, PM_{10}, and CO to less than twenty-five (25), fifteen (15), and one hundred (100) tons per twelve (12) consecutive month period, respectively, for each of the 2000, 2004, and 2006 modifications and render 326 IAC 2-2 not applicable. In addition, compliance with the above limits shall limit the potential to emit VOC of the manual shakeout unit and the automated shakeout unit to less than twenty-five (25) tons per twelve (12) consecutive month period each and render 326 IAC 8-1-6 not applicable.

(b) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM emissions from the shotblast machine (WHE02) shall not exceed 4.58 pounds per hour.

Compliance with the above limit, combined with the potential to emit PM from other emission units from the 1983 modification, shall limit the PM from the 1983 modification to less than twenty-five (25) tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

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

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
Scrap and Charge Handling including Scrap Charge Preheater (HEAT2)	4.95	11.97

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
Melting (Two (2) electric induction furnaces (FRN03 and FRN04))	4.95	11.97
Magnesium treatment	4.95	11.97
Pouring and cooling (Power & Free) (Total emission limit for both pouring and cooling)	9.90 (metal and sand)	19.05
Manual shakeout and degating	9.90 (metal and sand)	19.05
Automated shakeout machine	9.90 (metal and sand)	19.05
Shotblast Machine (WHE02)	4.95	11.97
Sand handling process	5.45	12.76
Mold Making	5.03	12.10
Truck loading and unloading	4.95	11.97

These limitations are based upon the following:

Interpolation of the data for process weight rates 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

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

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

Compliance Determination Requirements

D.1.4 Particulate Control

(a) In order to comply with Conditions D.1.1(a)(4), D.1.1(b) and D.1.2:

(1) The dust collector (K13) for particulate control shall be in operation and control emissions from the automated shakeout unit and sand handling system at all times the automated shakeout unit and sand handling system are in operation.

(2) The dust collector (K1) for particulate control shall be in operation and control emissions from the shotblast machine at all times the shotblast machine is in operation.

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

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

(a) In order to demonstrate compliance with Conditions D.1.1(a)(4) and D.1.2, the Permittee shall perform PM and PM_{10} testing on the sand handling and automated shakeout machine emissions at the outlet of the dust collector (K13) within five (5) years of the date of the most recent valid compliance demonstration. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions D.1.1(b) and D.1.2, the Permittee shall perform PM testing on the shotblaster emissions at the outlet of the dust collector (K1) within five (5) years from the date of the most recent valid compliance demonstration. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.1.6 Visible Emissions Notations

(a) Daily visible emission notations of the shotblast machine, automated shakeout machine, and sand handling system exhausts shall be performed 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.1.7 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the dust collector (K13) used in conjunction with the sand handling operations and automated shakeout unit, at least once per day when the processes 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 or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the dust collector (K1) used in conjunction with the shotblast machine, at least once per day when the process is 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 or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.1.8 Broken or Failed Bag or Cartridge Detection

(a) For single compartment bag filters or cartridge dust collectors controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment bag filters or cartridge dust collectors controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the amount of metal melted each month. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(b) To document compliance with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the shotblast machine, sand handling and automated shakeout unit exhausts. 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.1.7, the Permittee shall maintain records of the pressure drop across the dust collectors used in conjunction with the shot blast machine, sand handling system, and automated shakeout unit. 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1(a)(1) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30)

days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION E.1 SOURCE OPERATION CONDITIONS

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

(a) One (1) scrap and charge handling process, constructed in 1970, not exhausting through a stack, with a capacity of 4.95 tons of metal per hour.

(b) Two (2) electric induction furnaces, identified as FRN03 and FRN04, constructed in 2000, equipped with an optional fabric filter (K4) and exhausting through stack K4 and general building exhausts A and B, with a maximum charge rate of 4.95 tons of metal per hour, total.

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

E.1.1 General Provisions Relating to NESHAP ZZZZZ [40 CFR Part 63, Subpart A]

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

E.1.2 Iron and Steel Foundries Area Sources NESHAP [40 CFR Part 63, Subpart ZZZZZ]

The Permittee which engages in iron and steel iron foundry operations shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZZ for a small foundry (included as Attachment A of this permit), with a compliance date of January 2, 2009 for 40 CFR 63.10885(a) and 40 CFR 63.10886 and a compliance date of January 4, 2010 for 40 CFR 63.10885(b):

(1) 40 CFR 63.10880(a), (b)(1), (c), (f);
(2) 40 CFR 63.10881(a)(1), (a)(2), (d);
(3) 40 CFR 63.10885(a)(1), (a)(2)(i), (b);
(4) 40 CFR 63.10886;
(5) 40 CFR 63.10890;
(6) 40 CFR 63.10899(a), (b)(1)-(b)(6), (c)(3), (d);
(7) 40 CFR 63.10905; and
(8) 40 CFR 63.10906.

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

Source Name: Kingsbury Castings Division
Source Address: 3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, Indiana 46345
Mailing Address: P.O. Box 639, LaPorte, Indiana 46352
Part 70 Permit No.: T 091-25086-00078

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

Please check what document is being certified:

□ Annual Compliance Certification Letter

□ Test Result (specify)

□ Report (specify)

□ Notification (specify)

□ Affidavit (specify)

□ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Kingsbury Castings Division
Source Address: 3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, Indiana 46345
Mailing Address: P.O. Box 639, LaPorte, Indiana 46352
Part 70 Permit No.: T 091-25086-00078

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 AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Kingsbury Castings Division
Source Address: 3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, Indiana 46345
Mailing Address: P.O. Box 639, LaPorte, Indiana 46352
Part 70 Permit No.: T 091-25086-00078
Facility: Entire Source
Parameter: Metal melt rate
Limit: Shall not exceed 24,000 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Metal Processed (tons)	Metal Processed (tons)	Metal Processed (tons)
	This Month	Previous 11 Months	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 AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Kingsbury Castings Division
Source Address: 3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, Indiana 46345
Mailing Address: P.O. Box 639, LaPorte, Indiana 46352
Part 70 Permit No.: T 091-25086-00078

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.

Attachment A
to Part 70 Operating Permit No. T 091-25086-00078

Kingsbury Castings Division
3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, IN 46345

Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

Source: 73 FR 252, Jan. 2, 2008, unless otherwise noted.

Applicability and Compliance Dates

§ 63.10880 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an iron and steel foundry that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each iron and steel foundry.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source on or after September 17, 2007. If an affected source is not new pursuant to the preceding sentence, it is not new as a result of a change in its compliance obligations pursuant to §63.10881(d).

(c) On and after January 2, 2008, if your iron and steel foundry becomes a major source as defined in §63.2, you must meet the requirements of 40 CFR part 63, subpart EEEEE.

(d) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's metal melt production for calendar year 2008. If the metal melt production for calendar year 2008 is 20,000 tons or less, your area source is a small foundry. If your metal melt production for calendar year 2008 is greater than 20,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than January 2, 2009.

(g) If you own or operate a new affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's annual metal melting capacity at startup. If the annual metal melting capacity is 10,000 tons or less, your area source is a small foundry. If the annual metal melting capacity is greater than 10,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than 120 days after startup.

§ 63.10881 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart by the dates in paragraphs (a)(1) through (3) of this section.

(1) Not later than January 2, 2009 for the pollution prevention management practices for metallic scrap in §63.10885(a) and binder formulations in §63.10886.

(2) Not later than January 4, 2010 for the pollution prevention management practices for mercury in §63.10885(b).

(3) Except as provided in paragraph (d) of this section, not later than 2 years after the date of your large foundry's notification of the initial determination required in §63.10880(f) for the standards and management practices in §63.10895.

(b) If you have a new affected source for which the initial startup date is on or before January 2, 2008, you must achieve compliance with the provisions of this subpart not later than January 2, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after January 2, 2008, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

(d) Following the initial determination for an existing affected source required in §63.10880(f),

(1) Beginning January 1, 2010, if the annual metal melt production of your small foundry exceeds 20,000 tons during the preceding calendar year, you must submit a notification of foundry reclassification to the Administrator within 30 days and comply with the requirements in paragraphs (d)(1)(i) or (ii) of this section, as applicable.

(i) If your small foundry has never been classified as a large foundry, you must comply with the requirements for a large foundry no later than 2 years after the date of your foundry's notification that the annual metal melt production exceeded 20,000 tons.

(ii) If your small foundry had previously been classified as a large foundry, you must comply with the requirements for a large foundry no later than the date of your foundry's most recent notification that the annual metal melt production exceeded 20,000 tons.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry, even if your annual metal melt production falls below 20,000 tons. After 3 years, you may reclassify your facility as a small foundry provided your annual metal melt production for the preceding calendar year was 20,000 tons or less. If you reclassify your large foundry as a small foundry, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a small foundry no later than the date you notify the Administrator of the reclassification. If the annual metal melt production exceeds 20,000 tons during a subsequent year, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the date you notify the Administrator of the reclassification.

(e) Following the initial determination for a new affected source required in §63.10880(g),

(1) If you increase the annual metal melt capacity of your small foundry to exceed 10,000 tons, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the startup date for the new equipment, if applicable, or the date of issuance for your revised State or Federal operating permit.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry. After 3 years, you may reclassify your facility as a small foundry provided your most recent annual metal melt capacity is 10,000 tons or less. If you reclassify your large foundry as a small foundry, you must notify the Administrator within 30 days and comply with the requirements for a small foundry no later than the date your melting equipment was removed or taken out of service, if applicable, or the date of issuance for your revised State or Federal operating permit.

Pollution Prevention Management Practices for New and Existing Affected Sources

§ 63.10885 What are my management practices for metallic scrap and mercury switches?

(a) *Metallic scrap management program.* For each segregated metallic scrap storage area, bin or pile, you must comply with the materials acquisition requirements in paragraph (a)(1) or (2) of this section. You must keep a copy of the material specifications onsite and readily available to all personnel with material acquisition duties, and provide a copy to each of your scrap providers. You may have certain scrap subject to paragraph (a)(1) of this section and other scrap subject to paragraph (a)(2) of this section at your facility provided the metallic scrap remains segregated until charge make-up.

(1) *Restricted metallic scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. For the purpose of this subpart, “free liquids” is defined as material that fails the paint filter test by EPA Method 9095B, “Paint Filter Liquids Test” (revision 2), November 2004 (incorporated by reference—see §63.14). The requirements for no free liquids do not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain.

(2) *General iron and steel scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only iron and steel scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the iron and steel foundry. The materials specifications must include at minimum the information specified in paragraph (a)(2)(i) or (ii) of this section.

(i) Except as provided in paragraph (a)(2)(ii) of this section, specifications for metallic scrap materials charged to a scrap preheater or metal melting furnace to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(ii) For scrap charged to a cupola metal melting furnace that is equipped with an afterburner, specifications for metallic scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastics, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(b) *Mercury requirements.* For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches.* You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the Administrator for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the Administrator or delegated authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the Administrator or delegated authority. The Administrator or delegated authority may change the approval status of the plan upon 90-days written notice based upon the semiannual report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from the scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the facility during the previous year and the basis for the estimate. The Administrator may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap supplier to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the Administrator that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregate form and does not have to be submitted for each shipment. The Administrator may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Mercury Switch Recovery Program and the State of Maine Mercury Switch Removal Program are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal or mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status and maintain records of documentation that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

§ 63.10886 What are my management practices for binder formulations?

For each furfuryl alcohol warm box mold or core making line at a new or existing iron and steel foundry, you must use a binder chemical formulation that does not use methanol as a specific ingredient of the catalyst formulation. This requirement does not apply to the resin portion of the binder system.

Requirements for New and Existing Affected Sources Classified as Small Foundries

§ 63.10890 What are my management practices and compliance requirements?

(a) You must comply with the pollution prevention management practices for metallic scrap and mercury switches in §63.10885 and binder formulations in §63.10886.

(b) You must submit an initial notification of applicability according to §63.9(b)(2).

(c) You must submit a notification of compliance status according to §63.9(h)(1)(i). You must send the notification of compliance status before the close of business on the 30th day after the applicable compliance date specified in §63.10881. The notification must include the following compliance certifications, as applicable:

(1) “This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)” and/or “This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2).”

(2) “This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1) and/or “This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator according to §63.10885(b)(2) and has prepared a plan for participation in the EPA-approved program according to §63.10885(b)(2)(iv)” and/or “The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches” and/or “This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4).”

(3) “This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886.”

(d) As required by §63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(e) You must maintain records of the information specified in paragraphs (e)(1) through (7) of this section according to the requirements in §63.10(b)(1).

(1) Records supporting your initial notification of applicability and your notification of compliance status according to §63.10(b)(2)(xiv).

(2) Records of your written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(3) If you are subject to the requirements for a site-specific plan for mercury switch removal under §63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). You must identify which option in paragraph §63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (f) of this section.

(4) If you are subject to the option for approved mercury programs under §63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(5) Records to document use of binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by §63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(6) Records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provides information on the binder or coating materials used.

(7) Records of metal melt production for each calendar year.

(f) You must submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The report must clearly identify any deviation from the pollution prevention management practices in §§63.10885 or 63.10886 and the corrective action taken.

(g) You must submit a written notification to the Administrator of the initial classification of your facility as a small foundry as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d)(1) or (e), as applicable.

(h) Following the initial determination for an existing affected source as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, you must comply with the requirements for large foundries by the applicable dates in §63.10881(d)(1)(i) or (d)(1)(ii). Following the initial determination for a new affected source as a small foundry, if you increase the annual metal melt

capacity to exceed 10,000 tons, you must comply with the requirements for a large foundry by the applicable dates in §63.10881(e)(1).

(i) You must comply with the following requirements of the General Provisions (40 CFR part 63, subpart A): §§63.1 through 63.5; §63.6(a), (b), (c), and (e)(1); §63.9; §63.10(a), (b)(1), (b)(2)(xiv), (b)(3), (d)(1), (d)(4), and (f); and §§63.13 through 63.16. Requirements of the General Provisions not cited in the preceding sentence do not apply to the owner or operator of a new or existing affected source that is classified as a small foundry.

Requirements for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

§ 63.10895 What are my standards and management practices?

(a) If you own or operate an affected source that is a large foundry as defined in §63.10906, you must comply with the pollution prevention management practices in §§63.10885 and 63.10886, the requirements in paragraphs (b) through (e) of this section, and the requirements in §§63.10896 through 63.10900.

(b) You must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(c) You must not discharge to the atmosphere emissions from any metal melting furnace or group of all metal melting furnaces that exceed the applicable limit in paragraph (c)(1) or (2) of this section. When an alternative emissions limit is provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limit is used to demonstrate compliance.

(1) For an existing iron and steel foundry, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged.

(2) For a new iron and steel foundry, 0.1 pounds of PM per ton of metal charged or 0.008 pounds of total metal HAP per ton of metal charged.

(d) If you own or operate a new affected source, you must comply with each control device parameter operating limit in paragraphs (d)(1) and (2) of this section that applies to you.

(1) For each wet scrubber applied to emissions from a metal melting furnace, you must maintain the 3-hour average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.

(2) For each electrostatic precipitator applied to emissions from a metal melting furnace, you must maintain the voltage and secondary current (or total power input) to the control device at or above the level established during the initial or subsequent performance test.

(e) If you own or operate a new or existing iron and steel foundry, you must not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 30 percent.

§ 63.10896 What are my operation and maintenance requirements?

(a) You must prepare and operate at all times according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in §63.10895. You must maintain a copy of the O&M plan at the facility and make it available for review upon request. At a minimum, each plan must contain the following information:

(1) General facility and contact information;

(2) Positions responsible for inspecting, maintaining, and repairing emissions control devices which are used to comply with this subpart;

(3) Description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment, and conditions. For baghouses that are equipped with bag leak detection systems, the O&M plan must include the site-specific monitoring plan required in §63.10897(d)(2).

(4) Identity and estimated quantity of the replacement parts that will be maintained in inventory; and

(5) For a new affected source, procedures for operating and maintaining a CPMS in accordance with manufacturer's specifications.

(b) You may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph (a)(1) through (5) of this section to demonstrate compliance with the requirements for an O&M plan.

§ 63.10897 What are my monitoring requirements?

(a) You must conduct an initial inspection of each PM control device for a metal melting furnace at an existing affected source. You must conduct each initial inspection no later than 60 days after your applicable compliance date for each installed control device which has been operated within 60 days of the compliance date. For an installed control device which has not operated within 60 days of the compliance date, you must conduct an initial inspection prior to startup of the control device. Following the initial inspections, you must perform periodic inspections and maintenance of each PM control device for a metal melting furnace at an existing affected source. You must perform the initial and periodic inspections according to the requirements in paragraphs (a)(1) through (4) of this section. You must record the results of each initial and periodic inspection and any maintenance action in the logbook required in §63.10899(b)(13).

(1) For the initial inspection of each baghouse, you must visually inspect the system ductwork and baghouse units for leaks. You must also inspect the inside of each baghouse for structural integrity and fabric filter condition. Following the initial inspections, you must inspect and maintain each baghouse according to the requirements in paragraphs (a)(1)(i) and (ii) of this section.

(i) You must conduct monthly visual inspections of the system ductwork for leaks.

(ii) You must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months.

(2) For the initial inspection of each dry electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold. You must also visually inspect the system ductwork and electrostatic housing unit and hopper for leaks and inspect the interior of the electrostatic

precipitator to determine the condition and integrity of corona wires, collection plates, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each dry electrostatic precipitator according to the requirements in paragraphs (a)(2)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold.

(ii) You must conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

(3) For the initial inspection of each wet electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present. You must also visually inspect the system ductwork and electrostatic precipitator housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each wet electrostatic precipitator according to the requirements in paragraphs (a)(3)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present.

(ii) You must conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.

(4) For the initial inspection of each wet scrubber, you must verify the presence of water flow to the scrubber. You must also visually inspect the system ductwork and scrubber unit for leaks and inspect the interior of the scrubber for structural integrity and the condition of the demister and spray nozzle. Following the initial inspection, you must inspect and maintain each wet scrubber according to the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the presence of water flow to the scrubber.

(ii) You must conduct monthly visual inspections of the system ductwork and scrubber unit for leaks.

(iii) You must conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.

(b) For each wet scrubber applied to emissions from a metal melting furnace at a new affected source, you must use a continuous parameter monitoring system (CPMS) to measure and record the 3-hour average pressure drop and scrubber water flow rate.

(c) For each electrostatic precipitator applied to emissions from a metal melting furnace at a new affected source, you must measure and record the hourly average voltage and secondary current (or total power input) using a CPMS.

(d) If you own or operate an existing affected source, you may install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse as an alternative to the baghouse inspection requirements in paragraph (a)(1) of this section. If you own or operate a new affected source, you must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse. You must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the requirements in paragraphs (d)(1)(i) through (vii) of this section.

(i) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.

(iii) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points. If the system is equipped with an alarm delay time feature, you also must adjust the alarm delay time.

(v) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the monitoring plan required by paragraph (d)(2) of this section.

(vi) For negative pressure baghouses, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(vii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) You must prepare a site-specific monitoring plan for each bag leak detection system to be incorporated in your O&M plan. You must operate and maintain each bag leak detection system according to the plan at all times. Each plan must address all of the items identified in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) Maintenance of the bag leak detection system including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output will be recorded and stored.

(vi) Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm as required in paragraph (d)(3) of this section.

(3) In the event that a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. You must record the date and time of each valid alarm, the time you initiated corrective action, the correction action taken, and the date on which corrective action was completed. Corrective actions may include, but are not limited to:

(i) Inspecting the bag house for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse department.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(e) You must make monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). You must repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. You must record the date and results of each inspection and the date of repair of any defect or deficiency.

(f) You must install, operate, and maintain each CPMS or other measurement device according to your O&M plan. You must record all information needed to document conformance with these requirements.

(g) In the event of an exceedance of an established emissions limitation (including an operating limit), you must restore operation of the emissions source (including the control device and associated capture system) to its normal or usual manner or operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the exceedance. You must record the date and time correction action was initiated, the correction action taken, and the date corrective action was completed.

(h) If you choose to comply with an emissions limit in §63.10895(c) using emissions averaging, you must calculate and record for each calendar month the pounds of PM or total metal HAP per ton of metal melted from the group of all metal melting furnaces at your foundry. You must calculate and record the weighted average pounds per ton emissions rate for the group of all metal melting furnaces at the foundry determined from the performance test procedures in §63.10898(d) and (e).

§ 63.10898 What are my performance test requirements?

(a) You must conduct a performance test to demonstrate initial compliance with the applicable emissions limits for each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit in §63.10895(c) and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions in §63.10895(e). You must conduct the test within 180 days of your compliance date and report the results in your notification of compliance status.

(1) If you own or operate an existing iron and steel foundry, you may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

(2) If you own or operate an existing iron and steel foundry and you choose to submit the results of a prior performance test according to paragraph (a)(1) of this section, you must submit a written notification to the Administrator of your intent to use the previous test data no later than 60 days after your compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(3) If you have an electric induction furnace equipped with an emissions control device at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) provided the furnaces are similar with respect to the type of emission control device that is used, the composition of the scrap charged, furnace size, and furnace melting temperature.

(4) If you have an uncontrolled electric induction furnace at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) provided the test results are prior to any control device and the electric induction furnaces are similar with respect to the composition of the scrap charged, furnace size, and furnace melting temperature.

(5) For electric induction furnaces that do not have emission capture systems, you may install a temporary enclosure for the purpose of representative sampling of emissions. A permanent enclosure and capture system is not required for the purpose of the performance test.

(b) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in §63.10895(c) for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time you elect to change an operating limit or make a process change likely to increase HAP emissions.

(c) You must conduct each performance test according to the requirements in §63.7(e)(1), Table 1 to this subpart, and paragraphs (d) through (g) of this section.

(d) To determine compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) for a metal melting furnace in a lb/ton of metal charged format, compute the process-weighted mass emissions (E^p) for each test run using Equation 1 of this section:

$$E_p = \frac{C \times Q \times T}{P \times K} \qquad (Eq.\ 1)$$

Where:

E_p= Process-weighted mass emissions rate of PM or total metal HAP, pounds of PM or total metal HAP per ton (lb/ton) of metal charged;

C = Concentration of PM or total metal HAP measured during performance test run, grains per dry standard cubic foot (gr/dscf);

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per hour (dscf/hr);

T = Total time during a test run that a sample is withdrawn from the stack during melt production cycle, hr;

P = Total amount of metal charged during the test run, tons; and

K = Conversion factor, 7,000 grains per pound.

(e) To determine compliance with the applicable emissions limit in §63.10895(c) for a group of all metal melting furnaces using emissions averaging,

(1) Determine and record the monthly average charge rate for each metal melting furnace at your iron and steel foundry for the previous calendar month; and

(2) Compute the mass-weighted PM or total metal HAP using Equation 2 of this section.

$$E_c = \frac{\sum_{i=1}^{n} \left(E_{pi} \times T_{ti}\right)}{\sum_{i=1}^{n} T_{ti}} \qquad (Eq.\ 2)$$

Where:

E_C= The mass-weighted PM or total metal HAP emissions for the group of all metal melting furnaces at the foundry, pounds of PM or total metal HAP per ton of metal charged;

E_{pi}= Process-weighted mass emissions of PM or total metal HAP for individual emission unit i as determined from the performance test and calculated using Equation 1 of this section, pounds of PM or total metal HAP per ton of metal charged;

T_{ti}= Total tons of metal charged for individual emission unit i for the calendar month prior to the performance test, tons; and

n = The total number of metal melting furnaces at the iron and steel foundry.

(3) For an uncontrolled electric induction furnace that is not equipped with a capture system and has not been previously tested for PM or total metal HAP, you may assume an emissions factor of 2 pounds per ton of PM or 0.13 pounds of total metal HAP per ton of metal melted in Equation 2 of this section instead

of a measured test value. If the uncontrolled electric induction furnace is equipped with a capture system, you must use a measured test value.

(f) To determine compliance with the applicable PM or total metal HAP emissions limit for a metal melting furnace in §63.10895(c) when emissions from one or more regulated furnaces are combined with other non-regulated emissions sources, you may demonstrate compliance using the procedures in paragraphs (f)(1) through (3) of this section.

(1) Determine the PM or total metal HAP process-weighted mass emissions for each of the regulated streams prior to the combination with other exhaust streams or control device.

(2) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 3 of this section.

$$\%\ \text{reduction} = \frac{E_i - E_o}{E_i} \times 100\% \qquad (\text{Eq. 3})$$

Where:

E_i= Mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr;

E_o= Mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(3) Meet the applicable emissions limit based on the calculated PM or total metal HAP process-weighted mass emissions for the regulated emissions source using Equation 4 of this section:

$$E_{p1,\ldots} E_{p1} \times \left(1 - \frac{\%\ \text{reduction}}{100}\right) \qquad (\text{Eq. 4})$$

Where:

$E_{p1released}$= Calculated process-weighted mass emissions of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, pounds of PM or total metal HAP per ton of metal charged; and

E_{p1i}= Process-weighted mass emissions of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, pounds of PM or total metal HAP per ton of metal charged.

(g) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time or other situations that are not expressly considered in paragraphs (d) through (f) of this section, you must submit a site-specific test plan to the Administrator for approval according to the requirements in §63.7(c)(2) and (3).

(h) You must conduct each opacity test for fugitive emissions according to the requirements in §63.6(h)(5) and Table 1 to this subpart.

(i) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.10895(e) no less frequently than every 6 months and each time you make a process change likely to increase fugitive emissions.

(j) In your performance test report, you must certify that the capture system operated normally during the performance test.

(k) You must establish operating limits for a new affected source during the initial performance test according to the requirements in Table 2 of this subpart.

(l) You may change the operating limits for a wet scrubber, electrostatic precipitator, or baghouse if you meet the requirements in paragraphs (l)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your plan to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in §63.10895(c).

(3) Establish revised operating limits according to the applicable procedures in Table 2 to this subpart.

§ 63.10899 What are my recordkeeping and reporting requirements?

(a) As required by §63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(b) In addition to the records required by 40 CFR 63.10, you must keep records of the information specified in paragraphs (b)(1) through (13) of this section.

(1) You must keep records of your written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(2) If you are subject to the requirements for a site-specific plan for mercury under §63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). You must identify which option in §63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (c) of this section.

(3) If you are subject to the option for approved mercury programs under §63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If your scrap provider is a broker, you must maintain records

identifying each of the broker's scrap suppliers and documenting the scrap supplier's participation in an approved mercury switch removal program.

(4) You must keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by §63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(5) You must keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provide information on the binder or coating materials used.

(6) You must keep records of monthly metal melt production for each calendar year.

(7) You must keep a copy of the operation and maintenance plan as required by §63.10896(a) and records that demonstrate compliance with plan requirements.

(8) If you use emissions averaging, you must keep records of the monthly metal melting rate for each furnace at your iron and steel foundry, and records of the calculated pounds of PM or total metal HAP per ton of metal melted for the group of all metal melting furnaces required by §63.10897(h).

(9) If applicable, you must keep records for bag leak detection systems as follows:

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(10) You must keep records of capture system inspections and repairs as required by §63.10897(e).

(11) You must keep records demonstrating conformance with your specifications for the operation of CPMS as required by §63.10897(f).

(12) You must keep records of corrective action(s) for exceedances and excursions as required by §63.10897(g).

(13) You must record the results of each inspection and maintenance required by §63.10897(a) for PM control devices in a logbook (written or electronic format). You must keep the logbook onsite and make the logbook available to the Administrator upon request. You must keep records of the information specified in paragraphs (b)(13)(i) through (iii) of this section.

(i) The date and time of each recorded action for a fabric filter, the results of each inspection, and the results of any maintenance performed on the bag filters.

(ii) The date and time of each recorded action for a wet or dry electrostatic precipitator (including ductwork), the results of each inspection, and the results of any maintenance performed for the electrostatic precipitator.

(iii) The date and time of each recorded action for a wet scrubber (including ductwork), the results of each inspection, and the results of any maintenance performed on the wet scrubber.

(c) You must submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The reports must include, at a minimum, the following information as applicable:

(1) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;

(2) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and

(3) Summary information on any deviation from the pollution prevention management practices in §§63.10885 and 63.10886 and the operation and maintenance requirements §63.10896 and the corrective action taken.

(d) You must submit written notification to the Administrator of the initial classification of your new or existing affected source as a large iron and steel facility as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d) or (e), as applicable.

§ 63.10900 What parts of the General Provisions apply to my large foundry?

(a) If you own or operate a new or existing affected source that is classified as a large foundry, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 3 of this subpart.

(b) If you own or operator a new or existing affected source that is classified as a large foundry, your notification of compliance status required by §63.9(h) must include each applicable certification of compliance, signed by a responsible official, in Table 4 of this subpart.

Other Requirements and Information

§ 63.10905 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under §63.6(h)(9).

(3) Approval of a major change to test methods under §63.7(e)(2)(ii) and (f). A “major change to test method” is defined in §63.90.

(4) Approval of a major change to monitoring under §63.8(f). A “major change to monitoring” under is defined in §63.90.

(5) Approval of a major change to recordkeeping and reporting under §63.10(f). A “major change to recordkeeping/reporting” is defined in §63.90.

(6) Approval of a local, State, or national mercury switch removal program under §63.10885(b)(2).

§ 63.10906 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section.

Annual metal melt capacity means the lower of the total metal melting furnace equipment melt rate capacity assuming 8,760 operating hours per year summed for all metal melting furnaces at the foundry or, if applicable, the maximum permitted metal melt production rate for the iron and steel foundry calculated on an annual basis. Unless otherwise specified in the permit, permitted metal melt production rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of operation. If the permit limits the operating hours of the furnace(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted metal melt production rate.

Annual metal melt production means the quantity of metal melted in a metal melting furnace or group of all metal melting furnaces at the iron and steel foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis on the quantity of metal charged to each metal melting furnace; the sum of the metal melt production for each furnace in a given calendar year is the annual metal melt production of the foundry.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Binder chemical means a component of a system of chemicals used to bind sand together into molds, mold sections, and cores through chemical reaction as opposed to pressure.

Capture system means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: Duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

Chlorinated plastics means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

Control device means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by a metal melting furnace.

Cupola means a vertical cylindrical shaft furnace that uses coke and forms of iron and steel such as scrap and foundry returns as the primary charge components and melts the iron and steel through combustion of the coke by a forced upward flow of heated air.

Deviation means any instance in which an affected source or an owner or operator of such an affected source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), management practice, or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any iron and steel foundry required to obtain such a permit; or

(3) Fails to meet any emissions limitation (including operating limits) or management standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Electric arc furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted through resistance heating by an electric current flowing through the arcs formed between the electrodes and the surface of the metal and also flowing through the metal between the arc paths.

Electric induction furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted though resistance heating by an electric current that is induced in the metal by passing an alternating current through a coil surrounding the metal charge or surrounding a pool of molten metal at the bottom of the vessel.

Exhaust stream means gases emitted from a process through a conveyance as defined in this subpart.

Foundry operations mean all process equipment and practices used to produce metal castings for shipment. *Foundry operations* include: Mold or core making and coating; scrap handling and preheating; metal melting and inoculation; pouring, cooling, and shakeout; shotblasting, grinding, and other metal finishing operations; and sand handling.

Free liquids means material that fails the paint filter liquids test by EPA Method 9095B, Revision 2, November 1994 (incorporated by reference—see §63.14). That is, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free liquids* .

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a system of equipment that is specifically designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. *Fugitive emissions* include pollutants released to the atmosphere through windows, doors, vents, or other building openings. *Fugitive emissions* also include pollutants released to the atmosphere through other general building ventilation or exhaust systems not specifically designed to capture pollutants at the source.

Furfuryl alcohol warm box mold or core making line means a mold or core making line in which the binder chemical system used is that system commonly designated as a furfuryl alcohol warm box system by the foundry industry.

Iron and steel foundry means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities, operations that only produce non-commercial castings, and operations associated with nonferrous metal production are not included in this definition.

Large foundry means, for an existing affected source, an iron and steel foundry with an annual metal melt production greater than 20,000 tons. For a new affected source, *large foundry* means an iron and steel foundry with an annual metal melt capacity greater than 10,000 tons.

Mercury switch means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

Metal charged means the quantity of scrap metal, pig iron, metal returns, alloy materials, and other solid forms of iron and steel placed into a metal melting furnace. Metal charged does not include the quantity of fluxing agents or, in the case of a cupola, the quantity of coke that is placed into the metal melting furnace.

Metal melting furnace means a cupola, electric arc furnace, electric induction furnace, or similar device that converts scrap, foundry returns, and/or other solid forms of iron and/or steel to a liquid state. This definition does not include a holding furnace, an argon oxygen decarburization vessel, or ladle that receives molten metal from a metal melting furnace, to which metal ingots or other material may be added to adjust the metal chemistry.

Mold or core making line means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape, and harden the formed aggregate. This definition does not include a line for making greensand molds or cores.

Motor vehicle means an automotive vehicle not operated on rails and usually is operated with rubber tires for use on highways.

Motor vehicle scrap means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers, or other components that do not contain mercury switches.

Nonferrous metal means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent in percent by weight.

On blast means those periods of cupola operation when combustion (blast) air is introduced to the cupola furnace and the furnace is capable of producing molten metal. On blast conditions are characterized by both blast air introduction and molten metal production.

Responsible official means responsible official as defined in §63.2.

Scrap preheater means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

Scrap provider means the person (including a broker) who contracts directly with an iron and steel foundry to provide motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a foundry are not *scrap providers* .

Scrubber blowdown means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH.

Small foundry means, for an existing affected source, an iron and steel foundry that has an annual metal melt production of 20,000 tons or less. For a new affected source, *small foundry* means an iron and steel foundry that has an annual metal melt capacity of 10,000 tons or less.

Total metal HAP means, for the purposes of this subpart, the sum of the concentrations of compounds of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A–8). Only the measured concentration of the listed analytes that are present at concentrations exceeding one-half the quantitation limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantitation limit of the analytical method, the concentration of those analytes will be assumed to be zero for the purposes of calculating the total metal HAP for this subpart.

Table 1 to Subpart ZZZZZ of Part 63—Performance Test Requirements for New and Existing Affected Sources Classified as Large Foundries

As required in §63.10898(c) and (h), you must conduct performance tests according to the test methods and procedures in the following table:

For. . .	You must. . .	According to the following requirements. . .
1. Each metal melting furnace subject to a PM or total metal HAP limit in §63.10895(c)	a. Select sampling port locations and the number of traverse points in each stack or duct using EPA Method 1 or 1A (40 CFR part 60, appendix A) b. Determine volumetric flow rate of the stack gas using Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A) c. Determine dry molecular weight of the stack gas using EPA Method 3, 3A, or 3B (40 CFR part 60, appendix A).[1] d. Measure moisture content of the stack gas using EPA Method 4 (40 CFR part 60, A) e. Determine PM concentration using EPA Method 5, 5B, 5D, 5F, or 5I, as applicable or total metal HAP concentration using EPA Method 29 (40 CFR part 60, appendix A)	Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere. i. Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch. ii. For Method 29, only the measured concentration of the listed metal HAP analytes that are present at concentrations exceeding one-half the quantification limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantification limit of the analytical method, the concentration of those analytes is assumed to be zero for the purposes of calculating the total metal HAP.
		iii. A minimum of three valid test runs are needed to comprise a PM or total metal HAP performance test.
		iv. For cupola metal melting furnaces, sample PM or total metal HAP only

		during times when the cupola is on blast.
		v. For electric arc and electric induction metal melting furnaces, sample PM or total metal HAP only during normal melt production conditions, which may include, but are not limited to the following operations: Charging, melting, alloying, refining, slagging, and tapping.
		vi. Determine and record the total combined weight of tons of metal charged during the duration of each test run. You must compute the process-weighted mass emissions of PM according to Equation 1 of §63.10898(d) for an individual furnace or Equation 2 of §63.10898(e) for the group of all metal melting furnaces at the foundry.
2. Fugitive emissions from buildings or structures housing any iron and steel foundry emissions sources subject to opacity limit in §63.10895(e)	a. Using a certified observer, conduct each opacity test according to EPA Method 9 (40 CFR part 60, appendix A–4) and 40 CFR 63.6(h)(5)	i. The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.
		ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the opacity test such that the opacity observations are recorded during the PM or total metal HAP performance tests.
	b. As alternative to Method 9 performance test, conduct visible emissions test by Method 22 (40 CFR part 60, appendix A–7). The test is successful if no visible emissions are observed for 90 percent of the readings over 1 hour. If VE is observed greater than 10 percent of the time over 1 hour, then the facility must conduct another performance test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9 (40 CFR part 60, appendix A–4)	i. The observer may identify a limited number of openings or vents that appear to have the highest visible emissions and perform observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation. ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the visible emissions test such that the observations are recorded during the PM or total metal HAP performance tests.

[1]You may also use as an alternative to EPA Method 3B (40 CFR part 60, appendix A), the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses" (incorporated by reference—see §63.14).

Table 2 to Subpart ZZZZZ of Part 63—Procedures for Establishing Operating Limits for New Affected Sources Classified as Large Foundries

As required in §63.10898(k), you must establish operating limits using the procedures in the following table:

For . . .	You must . . .
1. Each wet scrubber subject to the operating limits in §63.10895(d)(1) for pressure drop and scrubber water flow rate.	Using the CPMS required in §63.10897(b), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the average pressure drop and average scrubber water flow rate for all the valid sampling runs in which the applicable emissions limit is met.
2. Each electrostatic precipitator subject to operating limits in §63.10895(d)(2) for voltage and secondary current (or total power input).	Using the CPMS required in §63.10897(c), measure and record voltage and secondary current (or total power input) in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the minimum hourly average voltage and secondary current (or total power input) from all the readings for each valid sampling run in which the applicable emissions limit is met.

Table 3 to Subpart ZZZZZ of Part 63—Applicability of General Provisions to New and Existing Affected Sources Classified as Large Foundries

As required in §63.10900(a), you must meet each requirement in the following table that applies to you:

Citation	Subject	Applies to large foundry?	Explanation
63.1	Applicability	Yes.	
63.2	Definitions	Yes.	
63.3	Units and abbreviations	Yes.	
63.4	Prohibited activities	Yes.	
63.5	Construction/reconstruction	Yes.	
63.6(a)–(g)	Compliance with standards and maintenance requirements	Yes.	
63.6(h)	Opacity and visible emissions standards	Yes.	
63.6(i)(i)–(j)	Compliance extension and Presidential compliance exemption	Yes.	
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes.	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	Subpart ZZZZZ

			specifies applicability and performance test dates.
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e), (f)(1)–(f)(6), (g)(1)–(g)(4)	Monitoring requirements	Yes.	
63.8(a)(4)	Additional monitoring requirements for control devices in §63.11	No.	
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No.	
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures	No.	
63.8(g)(5)	Data reduction	No.	
63.9	Notification requirements	Yes.	
63.10(a), (b)(1)–(b)(2)(xii) –(b)(2)(xiv), (b)(3), (d)(1)–(2), (e)(1)–(2), (f)	Recordkeeping and reporting requirements	Yes.	
63.10(c)(1)–(6), (c)(9)–(15)	Additional records for continuous monitoring systems	No.	
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for CMS	Yes.	
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes.	
63.10(e)(3)	Excess emissions reports	Yes.	
63.10(e)(4)	Reporting COMS data	No.	
63.11	Control device requirements	No.	
63.12	State authority and delegations	Yes.	
63.13–63.16	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality. Performance track provisions	Yes.	

Table 4 to Subpart ZZZZZ of Part 63—Compliance Certifications for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

As required by §63.10900(b), your notification of compliance status must include certifications of compliance according to the following table:

For. . .	Your notification of compliance status required by §63.9(h) must include this certification of compliance, signed by a responsible official:
Each new or existing affected source classified as a large foundry and subject to scrap management requirements in §63.10885(a)(1) and/or (2)	"This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2)."
Each new or existing affected source classified as a large foundry and subject to mercury switch removal requirements in §63.10885(b)	"This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1)" and/or "This facility participates in and purchases motor vehicles scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator according to §63.10885(b)(2) and have prepared a plan for participation in the EPA approved program according to §63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4)."
Each new or existing affected source classified as a large foundry and subject to §63.10886	"This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886."
Each new or existing affected source classified as a large foundry and subject to §63.10895(b)	"This facility operates a capture and collection system for each emissions source subject to this subpart according to §63.10895(b)."
Each existing affected source classified as a large foundry and subject to §63.10895(c)(1)	"This facility complies with the PM or total metal HAP emissions limit in §63.10895(c) for each metal melting furnace or group of all metal melting furnaces based on a previous performance test in accordance with §63.10898(a)(1)."
Each new or existing affected source classified as a large foundry and subject to §63.10896(a)	"This facility has prepared and will operate by an operation and maintenance plan according to §63.10896(a)."
Each new or existing (if applicable) affected source classified as a large foundry and subject to §63.10897(d)	"This facility has prepared and will operate by a site-specific monitoring plan for each bag leak detection system and submitted the plan to the Administrator for approval according to §63.10897(d)(2)."

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Kingsbury Castings Division
Source Location:	3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, IN 46345
County:	LaPorte
SIC Code:	3321
Operation Permit No.:	T 091-25086-00078
Permit Reviewer:	Laura Spriggs

Public Notice Information

On May 18, 2009, the Office of Air Quality (OAQ) had a notice published in The LaPorte Herald - Argus in LaPorte, Indiana, stating that Kingsbury Castings Division had applied for a transition from a FESOP to a Part 70 Operating Permit. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Changes

No comments were received, however, upon further review, the OAQ has decided to make the following revision to the permit. The changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Change No. 1:

IDEM, OAQ is revising Condition B.11 - Emergency Provisions to allow the Permittee to reference a previously reported emergency under paragraph (b)(5) in the Quarterly Deviation and Compliance Monitoring Report.

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

* * *

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report. **Any emergencies that have been previously reported pursuant to paragraph (b)(5) of this condition and certified by a "responsible official" need only referenced by the date of the original report.**

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**Kingsbury Castings Division**
Source Location:	**3232 3rd Road Annex, Kingsbury Industrial Park, Kingsbury, IN 46345**
County:	**LaPorte**
SIC Code:	**3321**
Part 70 OP No.:	**T 091-25086-00078**
Permit Reviewer:	**Laura Spriggs**

The Office of Air Quality (OAQ) has reviewed the Part 70 Operating Permit application from Kingsbury Castings Division relating to the operation of a stationary ductile iron foundry.

History

On August 1, 2007, Kingsbury Castings Division submitted an application to the OAQ requesting to transition from a Federally Enforceable State Operating Permit (FESOP) to a Part 70 Operating Permit. Kingsbury Castings Division was issued FESOP No. F 091-15282-00078 on January 5, 2006. The potential to emit carbon monoxide (CO) from pouring, cooling, and shakeout operations was previously unidentified at foundries. Based on testing conducted at Kingsbury Castings Division, it has been determined that plant production cannot be limited to keep CO emissions below FESOP allowable levels. Therefore, Kingsbury Castings Division has chosen to transition from a FESOP to a Part 70 Operating Permit as described in this technical support document.

Permitted Emission Units and Pollution Control Equipment

(a) One (1) scrap and charge handling process, constructed in 1970, not exhausting through a stack, with a capacity of 4.95 tons of metal per hour.

(b) One (1) natural gas-fired scrap charge preheater, identified as HEAT2, constructed in 1976, exhausting through stack 2, with a heat input capacity of 2.2 million British thermal units per hour.

(c) Two (2) electric induction furnaces, identified as FRN03 and FRN04, constructed in 2000, equipped with an optional fabric filter (K4) and exhausting through stack K4 and general building exhausts A and B, with a maximum charge rate of 4.95 tons of metal per hour, total.

(d) Four (4) natural gas-fired ladle heaters, exhausting through the general building ventilation, with a heat input capacity of 2.7 million British thermal units per hour, total.

(e) Magnesium treatment operations, operating since 1974, exhausting through general building exhausts A, B, 6, and 7, with a capacity of 4.95 tons of metal per hour.

(f) One (1) pouring and cooling line, identified as Power & Free, constructed in 1990 and modified in 2004, exhausting through stacks 1 through 5, 10, and 32, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

(g) One (1) manual shakeout and degating operation, constructed in 1980 and relocated in 1994 and 2006, equipped with a shaker conveyor collector (K14), with the ability to exhaust inside or through stack K14, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

(h) One (1) automated shakeout machine, constructed in 2006, equipped with a cartridge dust collector for particulate control, with the ability to exhaust inside or through stack K13, with a capacity of 4.95 tons of metal and 4.95 tons of sand per hour.

(i) One (1) shotblast machine, identified as WHE02, constructed in 1983, controlled by an integral dust collector (K1) and exhausting inside the building, with a capacity of 4.95 tons of castings per hour.

(j) One (1) cutoff saw, identified as SAW03, constructed in 1970, equipped with an optional fabric filter (K3) and exhausting inside the building, with a capacity of 4.95 tons of metal per hour.

(k) One (1) sand handling operation, constructed in 1970, including nine (9) sand silos, belt conveyors, pneumatic conveyors and fork lifts, controlled by one (1) dust collector (K13) and eight (8) bin vent filters (K5, K6, K7, K8, K9, K10, K11 and K12), with the ability to exhaust inside or through stack K13, with a capacity of 4.95 tons of sand per hour.

(l) Twenty (20) shell molding machines, identified as MOL01 through MOL020, two (2) constructed in 1970, two (2) constructed in 1974, one (1) constructed in 1975, one (1) constructed in 1978, one (1) constructed in 1980, two (2) constructed in 1983, two (2) constructed in 1986, two (2) constructed in 1992, two (2) constructed in 1993, four (4) constructed in 1995, and one (1) constructed in 1999, each equipped with a natural gas-fired heater, exhausting through stacks 13, 14, 17, 15, 16, and 26, using a release agent with no VOC, each with a capacity of 700 pounds of pre-coated sand per hour, each using 33.25 pounds of binder per hour, and each heater with a capacity of 1.0 million British thermal unit per hour.

(m) Twelve (12) shell core machines:

(1) Eight (8) shell core machines, identified as COR01 through COR08, two (2) constructed in 1974, one (1) constructed in 1979, one (1) constructed in 1980, two (2) constructed in 1983, and two (2) constructed in 1999, each equipped with a natural gas-fired heater, exhausting through stacks 18 and 30, using a release agent with no VOC, each with a capacity of 225 pounds of pre-coated sand per hour, each using 10.69 pounds of binder per hour, and each heater with a capacity of 0.22 million British thermal units per hour; and

(2) Four (4) shell core machines, identified as COR09 through COR12, constructed in 2006, each equipped with a natural gas-fired heater, exhausting through stacks 18 and 30, each with a capacity of 300 pounds of sand per hour, each using 14.25 pounds of binder per hour, and each heater with a capacity of 0.22 million British thermal units per hour.

(n) Truck loading and unloading, maximum throughput: 4.95 tons of sand per hour.

Emission Units and Pollution Control Equipment Removed From the Source

The following unit still remains at the source, but has been rendered physically inoperable. The Turntable is enclosed in such a way that there is no longer any access to load sand molds onto the turntable. The conveyors that were used to load the molds onto the turntable have been

removed. There was also a "lever" that was attached to the turntable that was used to knock the castings off the turntable once they had been cooled, so that they could be transferred to shakeout. This has been removed and so has the conveyor system that transferred the castings to the shakeout. The way it stands now, there is no way it could be used for production purposes.

(a) One (1) casting and cooling area, identified as TURN3, constructed in 1980, exhausting through stack 24, with a capacity of 4.95 tons of metal per hour and 4.95 tons of sand per hour.

Insignificant Activities

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including thirty-six (36) space heaters with a total capacity of 15.851 million British thermal units per hour.

(b) Combustion source flame safety purging on startup.

(c) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(d) Refractory storage not requiring air pollution control equipment.

(e) Machining where an aqueous cutting coolant continuously floods the machining interface.

(f) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, including two (2) cold cleaner degreasers, constructed in 1970, using less than five percent (5%) halogenated solvents by weight.

(g) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38°C (100°F); or

(2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(h) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(i) Closed loop heating and cooling systems.

(j) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(k) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.

(l) Noncontact cooling tower systems with either of the following:

Forced and induced draft cooling tower system not regulated under a NESHAP.

(m) Heat exchanger cleaning and repair.

(n) Paved and unpaved roads and parking lots with public access.

(o) Asbestos abatement projects regulated by 326 IAC 14-10.

(p) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(q) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38°C).

(r) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(s) Farm operations.

(t) One (1) sand pile, maximum input: 15,242 tons of loose sand per year.

Insignificant Activities Removed From the Source

The following insignificant activity is no longer operational:

(a) Underground conveyors.

Existing Approvals

Since the issuance of FESOP No. 091-15282-00078 on January 5, 2006, the source has constructed or has been operating under the following approvals as well:

(a) Significant Permit Revision No. 091-22593-00078, issued on April 19, 2006; and

(b) Administrative Amendment No. 091-25051-00078, issued on August 28, 2007.

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

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

(a) Metal Throughput Limit and PSD Limits

The metal throughput limit for the foundry has been revised to render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable pursuant to the PSD lookback as discussed in the State Rule Applicability section of this technical support document. In addition, CO emission limits have been added for pouring, cooling, and shakeout operations, a PM limit has been added for the shotblast machine, a PM10 limit has been added for the EIFs, and PM and PM10 limits have been added for the automated

shakeout unit in order to render 326 IAC 2-2 not applicable to the 1983, 2000, 2004, and 2006 modifications.

(b) Iron and Steel Foundries Area Source NESHAP

It has been determined that 40 CFR 63, Subpart ZZZZZ is applicable to Kingsbury Castings Division. Section E.1 has been added to the permit to reflect the applicable provisions of the rule and the entire rule has been included as Attachment A to the permit. Further discussion is included in the Federal Rule Applicability section of this technical support document.

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

(a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

(b) All FESOP conditions.

Reason not incorporated: The source is transitioning to a Part 70 Operating Permit; therefore, the FESOP limits are no longer applicable.

Air Pollution Control Justification as an Integral Part of the Process

The following integral to the process determination was provided in the Technical Support Document to FESOP No. F 091-15282-00078, issued on January 05, 2006, for the shotblasting operation dust collector:

(a) The shotblast system is designed to continuously recycle the shot because the dust collector removes the sand and dust from the shot curtain. Kingsbury Castings observes a significant cost savings from separating the sand/dust from the shot in order to allow the shot to be reused. Currently, Kingsbury Castings spends approximately $725 per ton of shot. Kingsbury operates the shotblast system 5,200 hours per year. The hourly potential amount of shot thrown is 22.5 tons per hour, equivalent to 117,000 tons in a 5,200 hour operating year. In a 5,200 hour operating year, Kingsbury Castings purchases 35 tons of shot. Thus, 99.97% of shot is recycled through the system. The cost of the 116,965 tons of shot that does not need to be purchased because of the control device is $84,799,625 per year. The annualized cost of the control device is $4,700 per year. Thus, the cost savings due to operating the control is $84,794,925 per year. In addition, recycling the shot also decreases the quantity of waste which would need to be disposed of from the blasting operations if the sand, dust and shot were not segregated. The reduction in disposal and purchasing costs has an overwhelming positive net economic effect.

(b) The process cannot operate without the control equipment because the shotblast system is designed and built to function with the dust collector serving as the mechanism to maintain negative pressure at the machine inlet points and to create the air curtain necessary to separate the sand and dust from the shot curtain prior to cleaning the casting. The manufacturer did not design the blasting system to utilize a separate auxiliary fan. The dust collector pulls the

less dense, yet abrasive, sand and dust material out of the shot curtain. This allows only the shot to re-enter the cleaning chamber of the machine. The sand, by its abrasive nature, would damage the castings if it were to re-enter the cleaning chamber. If that same sand and dust, again abrasive by nature, were to go through the fan wheel without being stopped by the dust collector, it would quickly destroy the fan wheel.

(c) The control equipment serves a primary purpose other than pollution control since the dust collector maintains the negative pressure at the machine's inlet points and creates the air curtain necessary to separate the sand and dust from the shot curtain prior to cleaning the casting. In addition, shotblast manufacturers have been providing these machines with dust collection since the 1930s, which is prior to the promulgation of any air permitting regulations.

The shotblasting system must maintain a pressure drop of 1 to 7 inches of water to operate properly. The cartridges in the dust collector are extremely important because they maintain the air curtain in order to separate the sand and dust from the shot curtain prior to cleaning the casting. The shotblasting system has been manufactured to operate properly by utilizing the cartridges. In order to clean the castings properly without causing damage, the air curtain must be maintained according to the manufacturer's specifications. Otherwise, the casting produced will be damaged or not cleaned to the customer's satisfaction.

(d) Kingsbury Castings must maintain the shotblasting system according to best management practices. In addition, Kingsbury Castings would not modify the manufacturer's blasting system (i.e., removing or altering the dust collector) after being permitted by the IDEM to operate as one system. Changing the operation of the blasting system would be a direct violation of the source's permit. In order to ensure compliance with the source's permit and achieve the casting finish necessary for retail sell, the dust collector will be used at all times while the shotblasting system is operating per the manufacturer's specifications.

IDEM, OAQ evaluated the justifications and agreed that the dust collector will be considered as an integral part of the shotblasting. Therefore, the permitting level will be determined using the potential to emit after control by the dust collector. Operating conditions in the proposed permit will specify that this dust collector shall operate at all times when the shotblasting is in operation.

Enforcement Issue

IDEM is aware that the potential to emit carbon monoxide (CO) from the pouring, cooling, and shakeout (PCS) processes exceeds the levels allowed under a FESOP permit. These emissions were previously unknown or unidentified. On August 11, 2006, IDEM sent a Notice of Limited Self-Disclosure Opportunity for CO Emissions from PCS Operations within the Foundry Sector to foundries in Indiana to give them the opportunity to identify these potential emissions and apply for the appropriate permit or permit modification. The notice stated that if the foundry chose to take advantage of the opportunity, consistent with the CO Emissions Guidelines, IDEM shall not seek either gravity-based or economic benefiit of non-compliance-based civil penalties against such sources. The Permittee has chosen to transition from a FESOP to a Part 70 Operating Permit as a result of this evaluation. No enforcement actions are pending as a result of this application.

Emission Calculations

See Appendix A of this document for detailed emission calculations. A PSD lookback for CO is provided in Appendix B of this document.

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, and 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) $PM_{2.5}$
LaPorte County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions, and the effective date of these rules was July 15, 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 PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants
LaPorte County has been classified as attainment or unclassifiable in Indiana for SO_2, CO, NO_2, PM_{10}, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(e) 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	302
PM_{10}	217
SO_2	0.54
VOC	64.3
CO	555
NO_x	18.3

HAPs	tons/year
Benzene	0.002
Dichlorobenzene	0.0002
Formaldehyde	0.09
Hexane	0.33
Toluene	0.003
Phenol	6.18
Acrolein	0.10
Hydrogen Cyanide	1.99
m-Xylene	1.20
Naphthalene	0.12
o-Xylene	0.24
Total Aromatic Amines	4.82
Total C2-C5 Aldehydes	1.20
Tetrachloroethene	0.19
Cobolt	5.0 e-6
Lead	0.004
Cadmium	0.0002
Chromium	1.81
Manganese	2.27
Nickel	1.66
Total HAPs	**22.22**

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

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

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

(d) Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-7 (a secondary metal production plant), 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/year)					
Process/ Emission Unit	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**
Scrap/Charge Handling	7.20[(1)]	4.32[(1)]	--	--	--	--
Preheater (HEAT2)	Included with Insignificant Activities					
Ladle Heaters	Included with Insignificant Activities					
Two (2) 2.5 ton EIFs (FRN03 & FRN04)	10.80[(1)]	14.88[(1)(2)]	--	--	--	--
Magnesium Treatment	21.60[(1)]	21.60[(1)]	--	--	--	--
Pouring/Cooling (Power & Free Line)	19.20[(1)]	28.80[(1)]	0.24[(1)]	1.68[(1)]	149.4[(1)]	0.12[(1)]
Manual Shakeout	1.20[(1)]	1.20[(1)]	--	14.40[(1)]	74.68[(1)]	--
Automated Shakeout	21.96[(1-3)]	12.00[(1-3)]	--	14.40[(1)]	74.68[(1)]	--
Sand Handling System			--	--	--	--
Shotblast Machine w/ integral control (WHE02)	1.13[(3)]	1.13[(3)]	--	--	--	--
Cutoff Saw (SAW03)	0.12[(1)]	0.05[(1)]	--	--	--	--

Process/ Emission Unit	Potential to Emit (tons/year)					
	PM	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**
Twenty (20) Shell Mold Machines (MOL01-MOL20)	13.20(1)	13.20(1)	--	3.41(1)	--	--
Shell Mold Machine Ovens	0.16	0.63	0.05	0.46	7.01	8.34
Twelve (12) Shell Core Machines (COR01-COR12)	1.10(1)	1.10(1)	--	0.28(1)	--	--
Shell Core Machine Ovens	0.02	0.08	0.01	0.06	0.93	1.10
Insignificant Activities	0.90	1.39	0.05	1.45	7.27	8.66
Fugitive Emissions	14.27	6.05	--	--	--	--
Total	**112.9**	**106.5**	**0.35**	**36.14**	**313.9**	**18.22**
PSD Major Source Threshold	**100**	**100**	**100**	**100**	**100**	**100**

(1) Potential to emit is based on a plant-wide melt rate limit of 24,000 tons per year.
(2) Potential to emit is based on an emission limit established to render the modification minor pursuant to 326 IAC 2-2.
(3) Potential to emit is based on potential emissions after control.

(a) This existing stationary source is major for PSD because the emissions of at least one criteria pollutant (PM, PM10, and CO) are greater than one hundred (> 100) tons per year, and it is one (1) 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

Compliance Assurance Monitoring (CAM)

(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:

CAM Analysis - PM							
Emission Unit / Pollutant	**Control Device Used**	**Emission Limitation or Standard (Y/N)**	**Uncontrolled PTE (tons/year)**	**Controlled PTE (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Automated Shakeout	Y-dust collector	Y	69.4	4.13	100	N	N
Shotblaster*	Y-dust collector	Y	1.13	1.13	100	N	N
Sand Handling	Y-dust collector	Y	78.1	4.64	100	N	N

CAM Analysis - PM_{10}							
Emission Unit / Pollutant	**Control Device Used**	**Emission Limitation or Standard (Y/N)**	**Uncontrolled PTE (tons/year)**	**Controlled PTE (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Automated Shakeout	Y-dust collector	N	48.57	2.89	100	N	N
Shotblaster*	Y-dust collector	N	1.13	1.13	100	N	N
Sand Handling	Y-dust collector	N	11.7	0.70	100	N	N

CAM Analysis - Cr							
Emission Unit / Pollutant	**Control Device Used**	**Emission Limitation or Standard (Y/N)**	**Uncontrolled PTE (tons/year)**	**Controlled PTE (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Automated Shakeout	Y-dust collector	N	0.89	0.053	10	N	N
Shotblaster*	Y-dust collector	N	0.015	0.015	10	N	N

CAM Analysis - Mn							
Emission Unit / Pollutant	**Control Device Used**	**Emission Limitation or Standard (Y/N)**	**Uncontrolled PTE (tons/year)**	**Controlled PTE (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Automated Shakeout	Y-dust collector	N	1.07	0.064	10	N	N
Shotblaster*	Y-dust collector	N	0.017	0.017	10	N	N

CAM Analysis - Ni							
Emission Unit / Pollutant	**Control Device Used**	**Emission Limitation or Standard (Y/N)**	**Uncontrolled PTE (tons/year)**	**Controlled PTE (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Automated Shakeout	Y-dust collector	N	0.82	0.049	10	N	N
Shotblaster*	Y-dust collector	N	0.013	0.013	10	N	N

CAM Analysis - Pb							
Emission Unit / Pollutant	**Control Device Used**	**Emission Limitation or Standard (Y/N)**	**Uncontrolled PTE (tons/year)**	**Controlled PTE (tons/year)**	**Major Source Threshold (tons/year)**	**CAM Applicable (Y/N)**	**Large Unit (Y/N)**
Automated Shakeout	Y-dust collector	N	0.0016	0.0001	10	N	N
Shotblaster*	Y-dust collector	N	0.00003	0.00003	10	N	N

*Based on the determination made in F 091-15282-00078, issued on January 5, 2006, the dust collector controlling the shotblaster is integral to the process (see the "Air Pollution Control Justification as an Integral Part of the Process" section for further detail). This justification shall also render the dust collector inherent to the process for purposes of CAM applicability. Therefore, the control device is taken into account when determining PTE.

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

New Source Performance Standards (NSPS)

(b) The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978, 40 CFR 60.110, Subpart K, are not included in the permit because Kingsbury Castings Division does not have any petroleum liquid storage vessels with a storage capacity greater than 40,000 gallons.

(c) The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984, 40 CFR 60.110a, Subpart Ka, are not included in the permit because Kingsbury Castings Division does not have any petroleum liquid storage vessels with a storage capacity greater than 40,000 gallons.

(d) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, are not included in the permit because Kingsbury Castings Division does not have any volatile organic liquid storage vessels with a storage capacity greater than 75 cubic meters (19,813 gallons).

(e) The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60.730, Subpart UUU, are not included in the permit because Kingsbury Castings Division does not use calciners or dryers, as defined in 40 CFR 60.731, to remove water from the mold or core sand.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning, 40 CFR 63.460, Subpart T, are not included in the permit for the insignificant activity cold cleaner degreasers because they do not use solvent containing 5 weight percent or more of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, and/or chloroform.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR 63.7680, Subpart EEEEE, are not included in the permit because the Kingsbury Castings Division iron foundry is not a major source of HAPs.

(h) Kingsbury Castings Division is considered an existing affected source under the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundry Area Sources, 40 CFR 63.10880, Subpart ZZZZZ because it is an iron foundry that is an areas source of HAPs that commenced construction before September 17, 2007. The units subject to this rule include the following:

(1) One (1) scrap and charge handling process, constructed in 1970, not exhausting through a stack, with a capacity of 4.95 tons of metal per hour.

(2) Two (2) electric induction furnaces, identified as FRN03 and FRN04, constructed in 2000, equipped with an optional fabric filter (K4) and exhausting through stack K4 and general building exhausts A and B, with a maximum charge rate of 4.95 tons of metal per hour, total.

Pursuant to 40 CFR 63.10880(f), Kingsbury Castings Division is considered a small foundry under Supbart ZZZZZ because the facility's metal melt production for calendar year 2008 did not exceed 20,000 tons (the actual melt production was 12,352 tons). The following provisions are applicable to Kingsbury Castings Division as a small foundry:

(1) 40 CFR 63.10880(a), (b)(1), (c), (f);
(2) 40 CFR 63.10881(a)(1), (a)(2), (d);
(3) 40 CFR 63.10885(a)(1), (a)(2)(i), (b);
(4) 40 CFR 63.10886;
(5) 40 CFR 63.10890;
(6) 40 CFR 63.10899(a), (b)(1)-(b)(6), (c)(3), (d);
(7) 40 CFR 63.10905; and
(8) 40 CFR 63.10906.

Pursuant to 40 CFR 63.10880(f), the Permittee was required to submit a written notification to USEPA identifying the area source as a small foundry no later than January 2, 2009. Pursuant to 40 CFR 63.10881(a)(1), the Permittee shall comply with 40 CFR 63.10885(a) and 40 CFR 63.10886 for the polllution prevention management practices for metallic scrap and binder formulations no later than January 2, 2009. Pursuant to 40 CFR 63.10881(a)(2), the Permittee shall comply with 40 CFR 63.10885(b) for pollution prevention management practices for mercury no later than January 4, 2010.

Kingsbury Castings Division will be permitted to melt up to 24,000 tons of metal per twelve (12) consecutive month period. Pursuant to 40 CFR 63.10881(d)(1), beginning January 1, 2010, if the annual metal melt production of Kingsbury Castings Division exceeds 20,000 tons during the preceding calendar year, the Permittee must submit a notification of foundry reclassification to USEPA within 30 days and must comply with the requirements for a large foundry no later than two (2) years after the date of notification that the annual metal melt production rate exceeded 20,000 tons. In addition the Permittee shall submit an application to IDEM, OAQ for a Significant Permit Modification to update the applicable provisions of 40 CFR 63, Subpart ZZZZZ in the permit.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 2-2 (Prevention of Significant Deterioration)

History

(a) Construction of the Kingsbury Castings Division ductile iron foundry commenced prior to August 7, 1977; therefore the source was not originally subject to the PSD requirements of 326 IAC 2-2. This source is considered 1 of 28 source categories. At this time the only known pollutant to exceed the PSD major source threshold based on unlimited PTE was PM.

(b) The throughput and emission limitations of CP 091-4827-00078, issued on February 3, 1997, limited the potential to emit of PM to less than 100 tons per year from the entire source. Therefore, the source was limited such that it was a minor source pursuant to 326 IAC 2-2, PSD, following the modification included in that permit.

(c) Pursuant to FESOP No. F 091-15282-00078, issued on January 5, 2006, the amount of metal processed by the source was limited to less than 33,394 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, and the amount of sand processed by the source was limited to less than 33,394 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. These limitations, in conjunction with other process-specific PM and PM_{10} limitations and the unrestricted potential to emit of the rest of the source, limited the potential to emit PM and PM_{10} to less than 100 tons per year from the entire source. Therefore, this source remained a minor source pursuant to 326 IAC 2-2, PSD.

(d) A new automated shakeout unit was approved for construction through Significant Permit Revision No. 091-22593-00078, issued on April 19, 2006. The source remained limited in such a way that the PTE of PM and PM_{10} remained less than 100 tons per year.

PSD Lookback

Carbon monoxide (CO) emissions from pouring, cooling, and shakeout operations at foundries were previously unidentified. Subsequent testing conducted on these operations at foundries has revealed that there are potential CO emissions due to the use of sand containing carbon material used in the molds and/or cores. When the molten metal is poured into the molds, the heat of the metal causes an incomplete combustion reaction with the carbon contained in the mold and/or core sand that releases CO.

Kingsbury Castings Division conducted site-specific testing on November 1, 2006 on its pouring, cooling, and shakeout operations. The average CO emissions from the testing were 18.67 pounds of CO per ton of metal for the combined operations. Kingsbury Castings Division estimates that two-thirds of the emissions are attributable to the pouring and cooling operations and one-third of the emissions are attributable to the shakeout operation.

Based on this site-specific CO testing, Kingsbury Castings Division has determined that it cannot limit its melt rate to stay below the 100 tons per year of CO required to remain regulated under a FESOP. In addition, a PSD lookback was performed to determine if PSD analysis would have been necessary for CO at any point. The lookback of each project is discussed below. A discussion of the emission factors used in the analysis is also provided below following the lookback. It should be noted that some melt rate limits are being proposed in this lookback. In these cases, the proposed limits have been compared to actual melt rates to ensure that the actual rates did not exceed the proposed limits. Calculations and additional information can be found in Appendix B to this technical support document.

(a) Existing Plant Configuration on August 7, 1977
Based on the units that existed at Kingsbury Castings Division as of the PSD applicability date, August 7, 1977, the source would have been considered an existing major source under PSD because the controlled PTE of PM and CO exceeded 100 tons per year and the source is 1 of 28 source categories. The PTE of PM_{10} also exceeded 100 tons per year; however, PM_{10} was not yet a NSR regulated pollutant. Since the source constructed prior to the PSD applicability date, PSD BACT analysis was not required for the existing units. All subsequent modifications would have been evaluated against the PSD significant levels.

(b) 1978 Modification
The 1978 modification consisted of the addition of one (1) shell mold machine and one (1) shell mold machine oven. The increase in potential to emit (PTE) from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(c) 1979 Modification
The 1979 modification consisted of the addition of one (1) shell core machine and one (1) shell core machine oven. The increase in PTE from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(d) 1980 Modification
The 1980 modification consisted of the replacement of the manual shakeout unit and the addition of pouring/cooling turntable (Turn 3), one (1) shell mold machine, one (1) shell mold machine oven, one (1) shell core machine, and one (1) shell core machine oven. The increase in PTE from this modification exceeded the PSD significant levels for PM and CO (also for PM_{10}, but this was not yet a NSR regulated pollutant in 1980). With the assumption that the replacement of the manual shakeout unit was a like exchange of units, not resulting in debottlenecking or other increased emissions, and with a metal throughput limit on the pouring/cooling turntable of 8,800 tons per twelve (12) consecutive month period, the 1980 project was limited such that it was below the PSD significant levels. Based on actual melt rates provided by the Permittee, the total metal throughput to Turn 1, Turn 2, and Turn 3 combined never exceeded 8,800 tons per year while these units were in operation. Therefore, a PSD BACT analysis is not necessary for this project.

(e) 1983 Modification
The 1983 modification consisted of the replacement of two (2) shotblast machines with one (1) shotblast machine and the addition of two (2) shell mold machines, two (2) shell mold machine ovens, two (2) shell core machines, and two (2) shell core machine ovens. The increase in PTE from this project was less than the PSD significant levels after consideration of PM control of the shotblast machine. The particulate control device controlling the shotblast machine must be in operation at all times that the shotblast machine is in operation. This is an existing requirement in the permit. Based on the requirement to use of the shotblast unit particulate control device, PSD BACT analysis would not have been necessary for this project.

(f) 1984 Modification
The 1984 modification consisted of the removal of one (1) 5.0 ton EIF and the addition of two (2) 2.5 ton EIFs. The increase in PTE due to this modification exceeded the PSD significant level for PM_{10}; however, PM_{10} was not a NSR regulated pollutant at this time. Even though the project is below other PSD significant levels, the Permittee has chosen to include a rate limit of 24,000 tons per twelve (12) consecutive month period. Based on actual melt rates provided by the Permittee, the total metal melt rate has never exceeded

24,000 tons per year. No PSD BACT analysis would have been necessary for this project.

(g) 1986 Modification
The 1986 modification consisted of the addition of two (2) shell mold machines and two (2) shell mold machine ovens. The increase in PTE from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(h) 1991 Modification
The 1991 modification consisted of the addition of the Power & Free pouring/cooling conveyor line. The increase in PTE from this project exceeded the PSD significant levels for PM, PM_{10}, and CO. The Permittee has proposed to include a metal throughput limit of 12,450 tons per twelve (12) consecutive month period to render PSD not applicable to the 1991 project. Based on actual melt rates provided by the Permittee, the metal throughput to the Power & Free pouring/cooling line did not exceed 12,450 tons per year until 2005. Note: An increased throughput rate was established for the 2004 modification to the Power & Free line. Therefore, a PSD BACT analysis is not necessary for this project.

(i) 1992 Modification
The 1992 modification consisted of the addition of two (2) shell mold machines and two (2) shell mold machine ovens. The increase in PTE from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(j) 1993 Modification
The 1993 modification consisted of the addition of two (2) shell mold machines and two (2) shell mold machine ovens. The increase in PTE from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(k) 1995 Modification
The 1995 modification consisted of the removal of thirteen (13) shell mold machines and the addition of four (4) shell mold machines and four (4) shell mold machine ovens. The increase in PTE from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(l) 1999 Modification
The 1999 modification consisted of the removal of three (3) shell core machines and the addition of one (1) shell mold machine, one (1) shell mold machine oven, two (2) shell core machines and two (2) shell core machine ovens. The increase in PTE from this project was less than the PSD significant levels or naturally minor. No facility-specific limits or PSD BACT analysis would have been necessary.

(m) 2000 Modification
The 2000 modification consisted of the removal of two (2) 2.5 ton EIFs and the addition of two (2) 2.5 ton EIFs (4.95 ton/hr total capacity). The PTE from this project exceeded PSD significant levels for PM_{10}. The Permittee has chosen to keep the metal melt rate limit of 24,000 tons per twelve (12) consecutive month period for the 2000 project furnaces to render PSD not applicable. Based on actual melt rates provided by the Permittee, the total metal melt rate has never exceeded 24,000 tons per year. Therefore, PSD BACT analysis is not necessary for this project.

(n) 2004 Modification

The 2004 modification consisted of modifying the existing Power & Free pouring/cooling conveyor line. This line was initially installed in 1991 with the intention of completely replacing the three (3) pouring/cooling turntables (Turn 1, Turn 2, and Turn 3). The line could not handle 100% of the production needs, however. It was modified in the 2004 project to be capable of handling all of the production and to allow for the shutdown of Turn 1, Turn 2, and Turn 3. The PTE of the project exceeded the PSD significant levels for PM, PM_{10}, and CO. The Permittee has proposed a metal throughput limit for the Power & Free pouring/cooling conveyor line of 24,000 tons per twelve (12) consecutive month period, combined with a netting analysis to render PSD not applicable to this project. The limited potential to emit of the modified Power & Free line at a throughput rate of 24,000 tons per year minus the actual emissions from Turn 1, Turn 2, and Turn 3 and the Power & Free Line based on 1994 and 1995 actual melt rates (baseline 24-month period), limits the 2004 project to less than the PSD significant levels. The actual metal throughput to the Power & Free line has never exceeded 24,000 tons per year. Turn 1, Turn 2, and Turn 3 did not operate after 2004. Therefore, PSD BACT analysis is not necessary for this project.

2004 Modification Netting Analysis						
	Emissions (ton/yr)					
Process/Emission Unit	PM	PM_{10}	SO_2	VOC	CO	NOx
PTE (Modified Units - Metal Throughput Limit of 24,000 tons/yr)						
Power & Free Pouring Cooling Conveyor Line	19.20	28.80	0.24	1.68	149.36	0.12
Netting - Emissions Based on 1994 and 1995 Baseline 24-Month Period						
Power & Free - Baseline	-5.00	-7.49	-0.06	-0.44	-38.87	-0.03
Turn 1, Turn 2, Turn 3 - Baseline	-5.00	-7.49	-0.06	-0.44	-38.87	-0.03
Emissions Increase of the Project	**9.21**	**13.81**	**0.12**	**0.81**	**71.63**	**0.06**
PSD Significant Level	**25**	**15**	**40**	**40**	**100**	**40**

(o) 2006 Modification

The 2006 modification consisted of the physical removal of Turn 1 and Turn 2 (Turn 3 was rendered physically inoperable) and the addition of an automated shakeout unit, four (4) shell core machines, and four (4) shell core machine ovens. The addition of the automated shakeout unit was not related to the 2004 modification nor was it intended to debottleneck the process. The addition of the automated shakeout was done to improve worker safety. Prior to the automated shakeout, all shakeout operations were performed manually, in which castings were broken apart from the molds by either dropping them on a slam table or having workers use hammers. This led to many OSHA reportable accidents and worker exposure to dust and silica. The manual shakeout operation still exists for castings that are too small or delicate for the automated shakeout unit. Therefore, this project is being evaluated on its own and not aggregated with the 2004 modification. The PTE from the 2006 modification exceeds the PSD significant level for PM, PM10, and CO. The Permittee has proposed a metal throughput limit to the automated shakeout unit of 24,000 tons per twelve (12) consecutive month period to render PSD not applicable to this project. The actual metal throughput to the automated shakeout unit has never exceeded 24,000 tons per year. In addition, the particulate control device controlling the automated shakeout unit must be in operation at all times that the automated shakeout unit is in operation to limit PM and PM10 emissions to below PSD significant levels. This is an existing requirement in the permit. Based on the throughput limit and the required use of particulate control, PSD BACT analysis is not necessary for this project.

Emission Factors

The emission factors used for determining PTE are based on AP-42 emission factors, except as provided below:

(a) Pouring/Cooling: PM/PM_{10}

The PM emission factor for pouring and cooling is the sum of the alternate emission factors for pouring/casting and the AP-42 emisson factors for cooling. The alternate PM emission factor for pouring/casting is supported by a test conducted on July 24, 2003, and validated by IDEM, OAQ, on November 3, 2003. The alternate emission factor includes a safety factor to account for variability in stack testing. For pouring/casting, the tested emissions were 0.162 lb PM/ton metal. The emission factor used is 0.20 lb PM/tons of metal. The alternate PM emission factor for pouring/casting was added to the AP-42 emission factor for cooling (1.4 lb PM/ton metal) to determine a total emission factor of 1.60 lb PM/ton of metal for the pouring/cooling operations.

The PM10 emission factor for pouring and cooling is supported by a test conducted at Accurate Casting in December of 2003, which has similar operations as Kingsbury Castings. For pouring/cooling, the tested emissions were 2.18 lb PM10/ton metal. The emission factor used is 2.4 lb PM10/ton metal to include a safety factor to account for varibility in stack testing.

(b) Pouring/Cooling/Shakeout: CO

The Permittee conducted CO testing on its pouring/cooling/shakeout operations on November 1, 2006. The emissions during testing were 18.67 lb CO/ton metal. The Permittee has estimated that two-thirds of the CO emissions are from pouring and cooling and one-third of the CO emissions are from shakeout. Therefore, the CO emission factor for pouring and cooling has been determined to be 12.45 lb CO/ton metal and the emission factor for shakeout has been determined to be 6.22 lb CO/ton metal.

(c) Manual Shakeout: PM/PM_{10}

The PM and PM_{10} emission factors for the manual shakeout operation were supported by a test conducted on September 11, 2002, and validated by IDEM, OAQ, on December 19, 2002. The alternate emission factors include a safety factor to account for variability in stack testing. The tested emissions were 0.027 lb PM/ton metal and 0.081 lb PM_{10}/ton metal. The emission factors used in the calculations are 0.10 lb PM/ton metal and 0.1 lb PM_{10}/ton metal.

(d) Shotblast Machine: PM/PM_{10}

The controlled PM and PM_{10} emissions from the shotblast machine are based on a dust collector design outlet grain loading of 0.01 gr/dscf and a maximum rate of 3,000 cfm. The control efficiency of the dust collector is estimated to be 99%.

PSD Summary

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

(1) The total metal melt rate shall not exceed 24,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) PM10 emissions from the two (2) EIFs (FRN03 and FRN04) shall not exceed 1.24 lb PM10/ton metal.

(3) The PM, PM_{10}, and CO emissions from pouring and cooling (Power & Free) shall not exceed 1.60 lb PM/ton metal, 2.40 lb PM_{10}/ton metal, and 12.45 lb CO/ton metal, respectively.

(4) The CO emissions from the automated shakeout unit shall not exceed 6.22 lb CO/ton metal.

(5) The PM and PM_{10} emissions from Stack K13, controlling the automated shakeout unit and sand handling system shall not exceed 1.83 lb PM/ton metal and 1.00 lb PM_{10}/ton metal, respectively.

Compliance with the above limits, combined with the potential to emit from other units associated with the respective modifications, shall limit the potential to emit PM, PM_{10}, and CO to less than twenty-five (25), fifteen (15), and one hundred (100) tons per twelve (12) consecutive month period, respectively, for each of the 2000, 2004, and 2006 modifications and render 326 IAC 2-2 not applicable.

(b) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM emissions from the shotblast machine (WHE02) shall not exceed 4.58 pounds per hour.

Compliance with the above limit, combined with the potential to emit PM from other emission units from the 1983 modification, shall limit the PM from the 1983 modification to less than twenty-five (25) tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

326 IAC 2-3 (Emission Offset)
LaPorte County was designated as nonattainment for the 1-hr ozone standard, effective December 12, 2004. The county was back in attainment effective July 19, 2007. The only project conducted during this time period was the 2006 modification. VOC levels were below the Emission Offset significant levels; therefore, LAER analysis for the 2006 project is not necessary.

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

326 IAC 2-6 (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 6-4 (Fugitive Dust)

326 IAC 6-4 applies to all sources of fugitive dust. Kingsbury Castings Division has the potential to generate fugitive dust; therefore, the following are applicable:

(a) Pursuant to 326 IAC 6-4-2, a source generating fugitive dust shall be in violation if any of the following criteria are violated:

(1) A source or combination of sources which cause to exist fugitive dust concentrations greater than sixty-seven percent (67%) in excess of ambient upwind concentrations as determined by the following formula:

$$P = \frac{100 * (R - U)}{U}$$

Where
P = Percentage increase
R = Number of particles of fugitive dust measured at downward receptor site
U = Number of particles of fugitive dust measured at upwind or background site

(2) The fugitive dust is comprised of fifty percent (50%) or more respirable dust, then the percent increase of dust concentration in (1) above shall be modified as follows:

$$P_R = (1.5 \pm N) * P$$

Where
N = Fraction of fugitive dust that is respirable dust
P_R = allowable percentage increase in dust concentration above background
P = no value greater than sixty-seven percent (67%)

(3) The ground level ambient air concentrations exceed fifty (50) micrograms per cubic meter above background concentrations for a sixty (60) minute period.

(4) If fugitive dust is visible crossing the boundary or property line of a source. This subdivision may be refuted by factual data expressed in subdivisions (1), (2) or (3) of this section. 326 IAC 6-4-2(4) is not federally enforceable.

(b) Pursuant to 326 IAC 6-4-6(6) (Exceptions), fugitive dust from a source caused by adverse meteorological conditions will be considered an exception to this rule (326 IAC 6-4) and therefore not in violation.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) applies to sources of fugitive particulate matter emssions located in specific nonattainment areas for particulate matter as of the promulgation of the rule. LaPorte County is not specifically listed in the rule. Therefore, the requirements of 326 IAC 6-5 do not apply to this source.

State Rule Applicability – Individual Facilities

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

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

Facility/Process	Process weight rate (ton/hr)	Allowable Emissions (lb/hr)	Uncontrolled Emissions (lb/hr)	Controlled Emissions (lb/hr)	Capable of Compliance?
Scrap and Charge Handling including Scrap Charge Preheater (HEAT2)	4.95	11.97	2.97	2.97	yes
Melting (Two (2) electric induction furnaces (FRN03 and FRN04))	4.95	11.97	4.46	4.46	yes
Magnesium treatment	4.95	11.97	8.91	8.91	yes
Pouring and cooling (Power & Free) (Total emission limit for both pouring and cooling)	9.90 (metal and sand)	19.05	7.92	7.92	yes
Manual Shakeout	9.90 (metal and sand)	19.05	0.50	0.50	yes
Automated Shakeout	9.90 (metal and sand)	19.05	15.84	0.94	yes
Shotblast Machine (WHE02)	4.95	11.97	25.71	0.26	yes-with control device
Sand Handling System	5.45	12.76	17.82	1.06	yes-with control device
Mold making	5.03	12.10	5.53	5.53	yes
Truck loading and unloading	4.95	11.97	1.78	1.78	yes

These limitations are based upon the following:

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

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

The units listed in the table above are capable of complying with the allowable particulate emission limitations pursuant to 326 IAC 6-3. The particulate control device for the shotblast machine (WHE02) and sand handling system must be in operation at all times that the shotblast machine and sand handling system are in operation.

(b) The total of all insignificant welding operations at this source consume less than six hundred twenty-five (625) pounds of rod or wire per day, based on maximum potential usage. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the welding operations are exempt from the requirements of 326 IAC 6-3-2.

(c) Less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less is cut at the insignificant torch cutting at this source, based on maximum potential usage. Therefore, pursuant to 326 IAC 6-3-1(b)(10), the torch cutting operations are exempt from the requirements of 326 IAC 6-3-2.

(d) Pursuant to 326 IAC 6-3-1(b)(11), noncontact cooling tower systems are exempt from the requirements of 326 IAC 6-3-2.

(e) Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than 0.551 pound per hour are exempt from the requirements of 326 IAC 6-3-2. Therefore, the cutoff saw, coremaking operations, and the ladle heaters are not subject to the requirements of 326 IAC 6-3-2.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The provisions of 326 IAC 7-1.1 apply to emissions units with a potential to emit 25 tons per year or ten pounds per hour of sulfur dioxide. No emissions units at Kingsbury Castings Division have the potential to emit above these levels; therefore the provisions of 326 IAC 7-1.1 do not apply to any units.

326 IAC 8-3 (Organic Solvent Degreasing Operations)
The two (2) insignificant degreasers were constructed in 1970 in LaPorte County. Therefore, the requirements of 326 IAC 8-3 are not applicable.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The provisions of 326 IAC 8-9 only apply to specific vessels located in Clark, Floyd, Lake, or Porter Counties. Therefore, the requirements of 326 IAC 8-9 do not apply to any storage vessels at Kingsbury Castings Division, located in LaPorte County.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The provisions of 326 IAC 8-1-6 apply to new facilities as of January 1, 1980 that have potential emissions of twenty-five (25) tons or more per year of VOC; are located anywhere in the state; and that are not otherwise regulated by other provisions of article 8, 326 IAC 20-48, of 326 IAC 20-56.

(a) The manual shakout unit, constructed in 1980, has potential VOC emissions greater than twenty-five (25) tons per year. However, a VOC limit of 1.2 pounds of VOC per ton of metal combined with a production limit of 24,000 tons per year, limits the VOC emissions from the manual shakeout operation to less than twenty-five (25) tons per year and renders the requirements of 326 IAC 8-1-6 not applicable. *Note: This is a new production limit, however, the previous production limit also limited VOC to less than twenty-five (25) tons per year and actual production rates have never exceeded 24,000 tons per year.*

(b) The automated shakout unit, constructed in 2006, has potential VOC emissions greater than twenty-five (25) tons per year. However, a VOC limit of 1.2 pounds of VOC per ton of metal combined with a production limit of 24,000 tons per year, limits the VOC emissions from the automated shakeout operation to less than twenty-five (25) tons per year and renders the requirements of 326 IAC 8-1-6 not applicable. *Note: This is a new production limit, however, the previous production limit also limited VOC to less than twenty-five (25) tons per year and actual production rates have never exceeded 24,000 tons per year.*

(c) No other units at Kingsbury Castings Division have potential VOC emissions greater than twenty-five (25) tons per year.

326 IAC 9 (Carbon Monoxide Emission Rules)
326 IAC 9 (Carbon Monoxide Emission Rules) applies to stationary sources of carbon monoxide emissions commencing operation after March 21, 1972, and for which an emission limit has been established under 326 IAC 9-1-2. Emission limits have been established in 326 IAC 9-1-2 for petroleum refining, ferrous metal smelters, and refuse incineration and refuse burning equipment. None of the processes for which emission limits have been established in 326 IAC 9-1-2 are

applicable to the emission units at Kingsbury Castings Division. Therefore, the requirements of 326 IAC 9 do not apply to any emission units at Kingsbury Castings Division.

326 IAC 10 (Nitrogen Oxide Rules)

(a) 326 IAC 10-1 (Nitrogen Oxide Control in Clark and Floyd Counties) applies to sources of NO_x Emissions located in Clark or Floyd Counties. Kingsbury Castings Division is located in LaPorte County; therefore, the requirements of 326 IAC 10-1 do not apply to any of the emission units at Kingsbury Castings Division.

(b) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories) applies to certain Portland cement kilns, specific boilers, and any other blast furnace gas fired boiler with a heat input greater than 250 MMBtu/hr. None of the units at Kingsbury Castings Division falls into these categories; therefore, the requirements of 326 IAC 10-3 do not apply to Kingsbury Castings Division.

326 IAC 11-1 Emission Limitations for Existing Foundries
The provisions of 326 IAC 11-1 apply to foundry cupolas from foundries in operation on or before December 6, 1968. This foundry utilizes electric induction furnaces and not cupolas; therefore the provisions of 326 IAC 11-1 do not apply to Kingsbury Castings Division.

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 determination requirements applicable to this source are as follows:

(a) The dust collector (K1), controlling emissions from the shotblast machine (WHE02), and the dust collector (K13), controlling emissions from the sand handling system and automated shakeout unit have the following compliance determination requirements:

Particulate Control

(1) The dust collector (K13) for particulate control shall be in operation and control emissions from the automated shakeout unit and sand handling system at all times the automated shakeout unit and sand handling system are in operation.

(2) The dust collector (K1) for particulate control shall be in operation and control emissions from the shotblast machine at all times the shotblast machine is in operation.

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

Testing

(a) The Permittee shall perform PM and PM_{10} testing on the sand handling and automated shakeout machine emissions at the outlet of the dust collector (K13) within five (5) years of the date of the most recent valid compliance demonstration. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} includes filterable and condensable PM.

(b) The Permittee shall perform PM testing on the shotblaster emissions at the outlet of the dust collector (K1) within five (5) years from the date of the most recent valid compliance demonstration. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

The particulate control and testing requirements are necessary to determine compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and to render 326 IAC 2-2 (PSD) not applicable.

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

(b) The shotblast machine (WHE02), sand handling system, and automated shakeout units have the following compliance monitoring requirements:

Visible Emissions Notations

(1) Daily visible emission notations of the shotblast machine, automated shakeout machine, and sand handling system exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

Parametric Monitoring

The Permittee shall record the pressure drop across the dust collector (K1) used in conjunction with the shotblast machine and the pressure drop across the dust collector (K13) used in conjunction with the sand handling system and automated shakeout unit, at least once per day when the processes 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 or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

Broken or Failed Bag or Cartridge Detection

(1) For single compartment bag filters or cartridge dust collectors controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(2) For single compartment bag filters or cartridge dust collectors controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

The above compliance monitoring requirements are necessary to ensure that the dust collectors controlling the shotblast machine (WHE02), the sand handling system, and the automated shakeout unit are working properly in order to comply with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and to render 326 IAC 2-2 (PSD) not applicable.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit 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 August 1, 2007. Additional information was received on February 5, 2009, March 12, 2009, and April 27, 2009.

Conclusion

The operation of this stationary ductile iron foundry shall be subject to the conditions of the attached Part 70 Operating Permit No. T 091-25086-00078.

Appendix A: Emission Calculations
Summary

Emission Unit	Unlimited PTE (ton/yr) - Maximum Capacity, No Controls						Limited PTE (ton/yr) - based on 24,000 ton/yr metal					
	PM	PM10	VOC	CO	NOx	SO2	PM	PM10	VOC	CO	NOx	SO2
Scrap/Charge Handling	13.01	7.81	--	--	--	--	7.20	4.32	--	--	--	--
One (1) Preheater	Included in Insignificant Activities						Included in Insignificant Activities					
Four (4) Ladle Heaters	Included in Insignificant Activities						Included in Insignificant Activities					
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr) (melting)	19.51	18.65	--	--	--	--	10.80	14.88	--	--	--	--
Magnesium Treatment	39.03	39.03	--	--	--	--	21.60	21.60	--	--	--	--
Pouring/Cooling - Power and Free Line	34.69	52.03	3.04	269.86	0.22	0.43	19.20	28.80	1.68	149.36	0.12	0.24
One (1) Manual Shakeout	2.17	2.17	26.02	134.93	--	--	1.20	1.20	14.40	74.68	--	--
One (1) Automated Shakeout	69.38	48.57	26.02	134.93	--	--	21.96	12.00	14.40	74.68	--	--
One (1) Sand Handling System	78.05	11.71	--	--	--	--			--	--	--	--
One (1) Shot Blast Machine (control is integral)	1.13	1.13	--	--	--	--	1.13	1.13	--	--	--	--
One (1) Cutoff Saw	0.22	0.10	--	--	--	--	0.12	0.05	--	--	--	--
Twenty (20) Shell Mold Machines @ 700 pounds sand each	24.24	24.24	6.72	--	--	--	13.20	13.20	3.41	--	--	--
Shell Mold Machine Ovens	0.16	0.63	0.46	7.01	8.34	0.05	0.16	0.63	0.46	7.01	8.34	0.05
Twelve (12) Shell Core Machines @ 300 pounds sand each	1.99	1.99	0.55	--	--	--	1.10	1.10	0.28	--	--	--
Shell Core Machine Ovens	0.02	0.08	0.06	0.93	1.10	0.01	0.02	0.08	0.06	0.93	1.10	0.01
Insignificant Activities	0.90	1.39	1.45	7.27	8.66	0.05	0.90	1.39	1.45	7.27	8.66	0.05
Fugitive Emissions	17.76	7.70	--	--	--	--	14.27	6.05	--	--	--	--
Total	302.25	217.22	64.31	554.92	18.32	0.54	112.86	106.45	36.14	313.92	18.22	0.35

Emission Unit	Unlimited PTE (ton/yr) - Maximum Capacity, No Controls																			
	Benzene	Dichloro-benzene	Formald-ehyde	Hexane	Toluene	Phenol	Acrolein	Hydrogen Cyanide	M-Xylene	Naphthalene	O-Xylene	Total Aromatic Amines	Total C2 to C5 Aldehydes	Tetrachloro-ethene	Cobolt	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Scrap/Charge Handling																2.98E-04		1.68E-01	2.00E-01	1.54E-01	0.52
One (1) Preheater	Included in Insignificant Activities																				
Four (4) Ladle Heaters	Included in Insignificant Activities																				
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr) (melting)																4.47E-04		2.52E-01	3.00E-01	2.30E-01	0.78
Magnesium Treatment																					0.00
Pouring/Cooling - Power and Free Line																7.94E-04		4.47E-01	5.34E-01	4.09E-01	
One (1) Manual Shakeout	2.01E-03		7.21E-02		2.56E-03	8.13E-01	9.68E-02	1.99E+00	1.20E+00	1.19E-01	2.41E-01	4.82E+00	1.20E+00			4.96E-05		2.80E-02	3.34E-02	2.56E-02	14.83
One (1) Automated Shakeout																1.59E-03		8.95E-01	1.07E+00	8.19E-01	
One (1) Shot Blast Machine (control is integral)																2.58E-05		1.45E-02	1.73E-02	1.33E-02	0.05
One (1) Cutoff Saw																					0.00
One (1) Sand Handling System																					0.00
Twenty (20) Shell Mold Machines @ 700 pounds sand each						4.96E+00															4.96
Shell Mold Machine Ovens	1.75E-04	1.00E-04	6.26E-03	1.50E-01	2.84E-04											4.17E-05	9.18E-05	1.17E-04	3.17E-05	1.75E-04	0.16
Twelve (12) Shell Core Machines @ 300 pounds sand each						4.08E-01															0.41
Shell Core Machine Ovens	2.31E-05	1.32E-05	8.26E-04	1.98E-02	3.74E-05											5.51E-06	1.21E-05	1.54E-05	4.18E-06	2.31E-05	0.02
Insignificant Activities	1.82E-04	1.04E-04	6.49E-03	1.56E-01	2.94E-04									1.94E-01	5.00E-06	8.53E-04	9.52E-05	7.07E-03	1.16E-01	8.73E-03	0.49
Fugitive Emissions																					0.00
Total	0.002	0.0002	0.09	0.33	0.003	6.18	0.10	1.99	1.20	0.12	0.24	4.82	1.20	0.19	5.00E-06	0.004	0.0002	1.81	2.27	1.66	22.22

Emission Unit	Limited PTE (ton/yr) - based on 24,000 ton/yr metal																			
	Benzene	Dichloro-benzene	Formald-ehyde	Hexane	Toluene	Phenol	Acrolein	Hydrogen Cyanide	M-Xylene	Naphthalene	O-Xylene	Total Aromatic Amines	Total C2 to C5 Aldehydes	Tetrachloro-ethene	Cobolt	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Scrap/Charge Handling																1.65E-04		9.29E-02	1.11E-01	8.50E-02	0.29
One (1) Preheater	Included in Insignificant Activities																				
Four (4) Ladle Heaters	Included in Insignificant Activities																				
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr) (melting)																2.47E-04		1.39E-01	1.66E-01	1.27E-01	0.43
Magnesium Treatment																					0.00
Pouring/Cooling - Turn 3 and Power and Free Lines																4.40E-04		2.48E-01	2.96E-01	2.27E-01	
One (1) Manual Shakeout	1.11E-03		3.99E-02		1.42E-03	4.50E-01	5.36E-02	1.10E+00	6.67E-01	6.61E-02	1.33E-01	2.67E+00	6.67E-01			2.75E-05		1.85E-02	1.85E-02	1.42E-02	6.76
One (1) Automated Shakeout																5.23E-05		2.95E-02	3.52E-02	2.70E-02	
One (1) Shot Blast Machine (control is integral)																2.58E-05		1.45E-02	1.73E-02	1.33E-02	0.05
One (1) Cutoff Saw																					0.00
One (1) Sand Handling System																					0.00
Twenty (20) Shell Mold Machines @ 700 pounds sand each						2.45E+00															2.45
Shell Mold Machine Ovens	1.75E-04	1.00E-04	6.26E-03	1.50E-01	2.84E-04											4.17E-05	9.18E-05	1.17E-04	3.17E-05	1.75E-04	0.16
Twelve (12) Shell Core Machines @ 300 pounds sand each						2.05E-01															0.20
Shell Core Machine Ovens	2.31E-05	1.32E-05	8.26E-04	1.98E-02	3.74E-05											5.51E-06	1.21E-05	1.54E-05	4.18E-06	2.31E-05	0.02
Insignificant Activities	1.82E-04	1.04E-04	6.49E-03	1.56E-01	2.94E-04									1.94E-01	5.00E-06	8.53E-04	9.52E-05	7.07E-03	1.16E-01	8.73E-03	0.49
Fugitive Emissions																					0.00
Total	0.001	0.0002	0.05	0.33	0.00	3.10	0.05	1.10	0.67	0.07	0.13	2.67	0.67	0.19	5.00E-06	0.00	0.0002	0.55	0.76	0.50	10.85

Maximum Melt Rate: **43362**

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Scrap and Charge	43362	PM	0.60	2.97	13.0	none		2.97	13.0
Handling - Includes process emissions from the									
Scrap Charge Preheater		PM-10	0.36	1.78	7.81	none		1.78	7.81
Source of Criteria		SO2	0.00	0.00	0.00			0.00	0.00
Pollutant Factors:		NOx	0.00	0.00	0.00			0.00	0.00
SCC# 3-04-003-15		VOC	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		CO	0.00	0.00	0.00			0.00	0.00
AP-42 Ch. 12.10		chromium	7.7E-03	3.8E-02	1.7E-01	none		3.8E-02	1.7E-01
Fifth edition 1995 (2003 Update)		manganese	9.2E-03	4.6E-02	2.0E-01	none		4.6E-02	2.0E-01
HAPs based on		nickel	7.1E-03	3.5E-02	1.5E-01	none		3.5E-02	1.5E-01
lab analysis		Lead	1.4E-05	6.8E-05	3.0E-04	none		6.8E-05	3.0E-04

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Melting - Electric	43362	PM	0.90	4.46	19.5	none		4.46	19.5
Induction Furnace		PM-10	0.86	4.26	18.6	none		4.26	18.6
Source of Criteria		SO2	0.00	0.00	0.00			0.00	0.00
Pollutant Factors:		NOx	0.00	0.00	0.00			0.00	0.00
EPA SCC# 3-04-003-03		VOC	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		CO	0.00	0.00	0.00			0.00	0.00
AP-42 Ch. 12.10		chromium	1.2E-02	5.7E-02	0.25	none		5.7E-02	2.5E-01
Fifth edition 1995 (2003 Update)		manganese	1.4E-02	6.9E-02	0.30	none		6.9E-02	3.0E-01
HAPs based on		nickel	1.1E-02	5.3E-02	0.23	none		5.3E-02	2.3E-01
lab analysis		Lead	2.1E-05	1.0E-04	0.0004	none		1.0E-04	4.5E-04

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Magnesium Treatment	43362	PM	1.80	8.91	39.0	none		8.91	39.0
Source of Criteria		PM-10	1.80	8.91	39.0	none		8.91	39.0
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-21		VOC	0.00	0.00	0.0			0.000	0.000
AP-42 Ch 12.10		CO	0.00	0.00	0.0			0.00	0.00
Fifth edition 1995		Lead	0.00	0.000	0.0			0.000	0.000

Methodology
Ef = emission factor
Ebc = emissions before control
Eac = emissions after control
Ebc (ton/yr) = Rate (ton iron/yr) * Ef (lb/ton) * (1 ton/2000 lb)
Eac (ton/yr) = Ebc (ton/yr) * (1 - Control Efficiency)
Emissions (lb/yr) = Emissions (ton/yr) * (2000 lb/ton) * (1 yr/8760 hr)

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Pouring/Casting	43362	PM	0.20	0.99	4.34	none		0.99	4.34
Source of Criteria		PM-10	2.40	11.88	52.03	none		11.88	52.0
Pollutant Factors:		SO2	0.02	0.099	0.43	none		0.099	0.434
FIRE 6.25		NOx	0.01	0.050	0.22	none		0.050	0.217
SCC# 3-04-003-20 (SO2, NOx, and VOC); PM based on 7/24/03		VOC	0.14	0.693	3.04	none		0.693	3.04
test, validated 11/3/03, 0.162 lb PM/ton metal, rounded up to the		CO	12.45	61.61	269.86	none		61.61	269.86
next tenth for safety; PM10 based on Dec. 2003 test at Accurate		chromium	2.6E-03	1.3E-02	5.6E-02	none		1.3E-02	5.6E-02
Casting for Pouring and Cooling, 2.18 lb PM10/ton metal		manganese	3.1E-03	1.5E-02	6.7E-02	none		1.5E-02	6.7E-02
rounded up for safety, CO Factor based on 11/1/06 stack test for		nickel	2.4E-03	1.2E-02	5.1E-02	none		1.2E-02	5.1E-02
pouring, cooling and shakeout (result: 18.67 lb/ton, assume 2/3		Lead	4.6E-06	2.3E-05	9.9E-05	none		2.3E-05	9.9E-05
is from pouring/cooling and 1/3 from shakeout); HAPs based on									
lab analysis.									

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Castings Cooling	43362	PM	1.40	6.93	30.4	none		6.93	30.4
Source of Criteria		PM-10	PM10 emissions from pouring and cooling are combined under Pouring/Casting Calculations						
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-25		VOC	0.00	0.00	0.0			0.00	0.00
		CO	CO emissions from pouring and cooling are combined under Pouring/Casting Calculations						
		chromium	1.8E-02	8.9E-02	3.9E-01	none		8.9E-02	0.392
		manganese	2.2E-02	1.1E-01	4.7E-01	none		1.1E-01	0.467
HAPs based on		nickel	1.7E-02	8.2E-02	3.6E-01	none		8.2E-02	0.358
lab analysis		Lead	3.2E-05	1.6E-04	7.0E-04	none		1.6E-04	0.001

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Manual Shakeout	43362	PM	0.10	0.495	2.17	none		0.495	2.17
Source of Criteria		PM-10	0.10	0.495	2.17	none		0.495	2.17
Pollutant Factors:		SO2	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.00			0.00	0.00
SCC# 3-04-003-31 (VOC)		VOC	1.20	5.94	26.02	none		5.94	26.0
HAPs based on lab analysis; PM/PM10 factors based on 9/11/02		CO	6.22	30.81	134.93	none		30.81	134.9
test, validated 12/19/02, 0.027 lb/ton PM & 0.081 lb/ton PM-10,		chromium	1.3E-03	6.4E-03	2.8E-02	none		6.4E-03	2.8E-02
rounded up to the next tenth; CO Factor based on 11/1/06 stack		manganese	1.5E-03	7.6E-03	3.3E-02	none		7.6E-03	3.3E-02
test for pouring, cooling and shakeout (result: 18.67 lb/ton,		nickel	1.2E-03	5.8E-03	2.6E-02	none		5.8E-03	2.6E-02
assume 2/3 is from pouring/cooling and 1/3 from shakeout)		Lead	2.3E-06	1.1E-05	5.0E-05	none		1.1E-05	5.0E-05

Process:	Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Automatic Shakeout	43362	PM	3.20	15.840	69.38	fabric filter, K13	94.05%	0.942	4.13
Source of Criteria		PM-10	2.24	11.088	48.57	fabric filter, K13	94.05%	0.660	2.89
Pollutant Factors:		SO2	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.00			0.00	0.00
SCC# 3-04-003-31		VOC	1.20	5.94	26.02	none		5.94	26.0
AP-42 Ch. 12.10, Fifth edition 1995		CO	6.22	30.81	134.93	none		30.81	134.9
CO Factor based on 11/1/06 stack test for pouring, cooling and		chromium	4.1E-02	2.0E-01	8.9E-01	fabric filter, K13	94.05%	1.2E-02	5.3E-02
shakeout (result: 18.67 lb/ton, assume 2/3 is from pouring/cooling		manganese	4.9E-02	2.4E-01	1.07E+00	fabric filter, K13	94.05%	1.5E-02	6.4E-02
and 1/3 from shakeout); HAPs based on lab analysis		nickel	3.8E-02	1.9E-01	8.2E-01	fabric filter, K13	94.05%	1.1E-02	4.9E-02
		Lead	7.3E-05	3.6E-04	1.6E-03	fabric filter, K13	94.05%	2.2E-05	9.5E-05

Note: Additional HAPs emissions for Pouring, Cooling, and Shakeout are shown on page 8

See p. 3 for Methodology

Process:	Rate (cfm)	Pollutant	Ef (gr/dscf)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Castings Cleaning	3000	PM	0.010	25.714	112.63	fabric filter, K1	99.00%	0.257	1.126
and Finishing (Shotblaster)		PM-10	0.010	25.714	112.63	fabric filter, K1	99.00%	0.257	1.126
Source of Criteria		SO2	0.00	0.000	0.00			0.000	0.000
Pollutant Factors:		NOx	0.00	0.000	0.00			0.000	0.000
PM/PM10 factors based on outlet grain loading		VOC	0.00	0.000	0.00			0.000	0.000
		CO	0.00	0.000	0.00			0.000	0.000
		chromium	1.3E-04	0.332	1.45	fabric filter, K1	99.00%	0.003	0.015
		manganese	1.5E-04	0.396	1.73	fabric filter, K1	99.00%	0.004	0.017
HAPs based on		nickel	1.2E-04	0.303	1.33	fabric filter, K1	99.00%	0.003	0.013
lab analysis		Lead	2.3E-07	0.001	0.003	fabric filter, K1	99.00%	0.00001	0.00003

The dust collector is considered integral to the process. Therefore, the unrestricted potential emissions are equal to the potential to emit after control.
The control efficiency is guaranteed by the vendor.

Process:	Rate (tons metal/yr)	Pollutant	Ef (lb/ton sand)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Sand Handling	43362	PM	3.60	17.8	78.1	fabric filter, K13	94.05%	1.06	4.64
Source of Criteria Pollutant Factors:		PM-10	0.54	2.67	11.7	fabric filter, K13	94.05%	0.159	0.697
FIRE, SCC# 3-04-003-50									

Process:	Rate (tons metal/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Cutoff saw	43362	PM	0.01	0.050	0.217	none		0.050	0.217
Source of Criteria		PM-10	0.0045	0.022	0.098	none		0.022	0.098
Pollutant Factors:									
FIRE 6.23									
EPA SCC# 3-04-003-60									

See page 3 for methodology for Sand Handling and Cutoff Saw

Methodology for Castings Cleaning

Eac (lb/hr) = Rate (cfm) * Ef (gr/dscf) * (60 min/hr) * (1 lb/7000 gr)
Ebc (lb/hr) = Eac / (1 - Control Efficiency)
Emissions (ton/yr) = Emissions (lb/hr) * (1 ton/2000 lb) * (8760 hr/yr)

Process:	Rate (tons sand/yr)	Pollutant	Ef (lb/ton)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Shell Mold Machines	44073.14	PM	1.10	5.53	24.2	none		5.53	24.2
Source of Criteria		PM-10	1.10	5.53	24.2	none		5.53	24.2
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-19		VOC	0.31	1.53	6.7	none		1.53	6.72
See below for VOC and Phenol Ef derivation		CO	0.00	0.00	0.0			0.00	0.00
		Phenol	0.23	1.13	4.96	none		1.13	4.96

Process:	Rate (tons sand/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Shell Core Machines	3625.06	PM	1.10	0.46	2.0	none		0.46	2.0
Source of Criteria		PM-10	1.10	0.46	2.0	none		0.46	2.0
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-19		VOC	0.31	0.13	0.6	none		0.13	0.55
See below for VOC and Phenol Ef derivation		CO	0.00	0.00	0.0			0.00	0.00
		Phenol	0.23	0.09	0.4	none		0.09	0.41

Methodology
Ef = emission factor
Ebc = emissions before control
Eac = emissions after control
Ebc (ton/yr) = Rate (ton iron/yr) * Ef (lb/ton) * (1 ton/2000 lb)
Eac (ton/yr) = Ebc (ton/yr) * (1 - Control Efficiency)
Emissions (lb/yr) = Emissions (ton/yr) * (2000 lb/ton) * (1 yr/8760 hr)
VOC and Phenol Emission Factors
VOC emissions come from mold glue and from resin evaporation

VOC Ef = [Glue Usage Rate (7.5 lb glue/ton sand) * Worst Case Wt% VOC (0.03 lb VOC/lb glue) * Flash Off Factor (100%)] + [Wt Loss due to Resin Evaporation (0.00004 lb VOC/lb sand) * (2000 lb/ton)]
Phenol emissions come from mold glue
Phenol Ef = Glue Usage Rate (7.5 lb glue/ton sand) * Worst Case Wt% Phenol (0.03 lb Phenol/lb glue)
The 100% Flash Off Factor is conservative because it assumes all VOC from resin is emitted here, rather than some at pouring and shakeout.

The phenol emissions are conservative since 100% of phenol is assumed to evaporate at the molding and core making. The worst case between this value and the value calculated for pouring, cooling, and shakeout will be used for summary.

The weight loss for VOC emissions from resin evaporation was determined by manufacturer's tests of the weight loss due to heating pre-coated sand. The emission factor was approved by IDEM, OAQ on 10/6/2005.

Appendix A: Emission Calculations

Mold and Core Making Natural Gas Combustion

			Pollutant					
			PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF			1.9	7.6	0.6	100.0	5.5	84.0
						**see below		
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)					
Shell molding machines (MOL01-MOL20)	20.00	166.857	0.159	0.634	0.050	8.343	0.459	7.008
Shell core machines (COR01 - COR12)	2.64	22.025	0.021	0.084	0.007	1.101	0.061	0.925

*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

			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
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)				
Shell molding machines (MOL01-MOL20)	20.00	166.857	1.8E-04	1.0E-04	6.3E-03	1.5E-01	2.8E-04
Shell core machines (COR01 - COR12)	2.64	22.025	2.3E-05	1.3E-05	8.3E-04	2.0E-02	3.7E-05

			HAPs - Metals					
			Lead	Cadmium	Chromium	Manganese	Nickel	Total HAPs (Organics + Metals)
Emission Factor in lb/MMCF			5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)					
Shell molding machines (MOL01-MOL20)	20.00	166.857	4.2E-05	9.2E-05	1.2E-04	3.2E-05	1.8E-04	1.6E-01
Shell core machines (COR01 - COR12)	2.64	22.025	5.5E-06	1.2E-05	1.5E-05	4.2E-06	2.3E-05	2.1E-02

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Heating Value of Natural Gas = 1050 MMBtu/MMCF
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * (8,760 hrs/yr) * (1 MMCF/1,050 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)
Potential Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * (1 ton/2,000 lb)

HAPs Emissions from Pouring, Cooling and Shakeout based on Binder System

Annual Usage of Index Material (lb/yr): 4,119,390

Binder System: Shell

HAP	Emission Factor (lb HAP released/lb index)	PTE (lb/yr)	PTE (ton/yr)
Acrolein	0.000047	194	0.097
Benzene*	0.000000977	4.02	0.002
Formaldehyde	0.000035	144	0.072
Hydrogen Cyanide*	0.00097	3988	1.99
M-Xylene	0.000585	2410	1.20
Naphthalene	0.000058	239	0.119
O-Xylene	0.000117	482	0.241
Phenol*	0.000395	1627	0.813
Toluene*	0.00000124	5.12	0.003
Total Aromatic Amines	0.002339	9635	4.82
Total C2 to C5 Aldehydes	0.000585	2410	1.20
Total HAPs		21137	10.6

METHODOLOGY

The index material is the resin

Annual Usage of Index Material (lb/yr) = Maximum plant capacity (ton/yr) * (2000 lb/1 ton) * 0.0475 lb index/lb sand

PTE (lb/yr) = Annual Usage of Index Material (lb/yr) * Emission Factor (lb HAP released/lb Index Material)

PTE (ton/yr) = PTE (lb/yr) * (1 ton/2000 lb)

Emission Factors are from Calculating Emission Factors for Pouring, Cooling, and Shakeout, Gary E. Mosher, American Foundrymen's Society, Modern Casting, Oct. 1994

*Emission factors for Hydrogen Cyanide, Phenol, Toluene and Benzene are alternate emission factors approved by IDEM, OAQ, based on tests conducted at the source on 10/14/04 (10% safety factor applied).

Criteria Pollutant Summary						
Insignficant Activity	PTE (ton/yr)					
	PM	PM10	VOC	NOx	CO	SO2
Natural Gas Combustion (multiple units)	0.164	0.658	0.476	8.656	7.271	0.052
Degreasing			0.972			
Welding	0.408	0.408				
Wet Cooling Towers	0.325	0.325				
Total	0.897	1.390	1.448	8.656	7.271	0.052

Organic HAPs Summary						
Insignficant Activity	PTE (ton/yr)					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Tetrachlorethene
Natural Gas Combustion (multiple units)	0.0002	0.0001	0.006	0.156	0.0003	
Degreasing						0.1943
Welding						
Wet Cooling Towers						
Total	0.0002	0.0001	0.006	0.156	0.0003	0.194

Metal HAPs Summary							
Insignficant Activity	PTE (ton/yr)						
	Lead	Cadmium	Chromium	Manganese	Nickel	Cobolt	Total HAPs
Natural Gas Combustion (multiple units)	0.00004	0.00010	0.00012	0.00003	0.00018		0.1634
Degreasing							0.1943
Welding	0.001		0.007	0.116	0.00855	0.000005	0.1323
Wet Cooling Towers							0.0000
Total	0.001	0.0001	0.007	0.116	0.009	0.000005	0.4900

Natural Gas Combustion

			Pollutant					
			PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF			1.9	7.6	0.6	100.0	5.5	84.0
						**see below		
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)					
Scrap charge preheater	2.20	18.354	0.017	0.070	0.006	0.918	0.050	0.771
Ladle Heaters	2.70	22.526	0.021	0.086	0.007	1.126	0.062	0.946
Space Heaters	15.85	132.243	0.126	0.503	0.040	6.612	0.364	5.554
		Total:	0.164	0.658	0.052	8.656	0.476	7.271

*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

			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
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)				
Scrap charge preheater	2.20	18.354	1.9E-05	1.1E-05	6.9E-04	1.7E-02	3.1E-05
Ladle Heaters	2.70	22.526	2.4E-05	1.4E-05	8.4E-04	2.0E-02	3.8E-05
Space Heaters	15.85	132.243	1.4E-04	7.9E-05	5.0E-03	1.2E-01	2.2E-04
		Total:	0.0002	0.0001	0.0065	0.1558	0.0003

			HAPs - Metals					
			Lead	Cadmium	Chromium	Manganese	Nickel	Total HAPs (Organics + Metals)
Emission Factor in lb/MMCF			5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)					
Scrap charge preheater	2.20	18.354	4.6E-06	1.0E-05	1.3E-05	3.5E-06	1.9E-05	1.7E-02
Ladle Heaters	2.70	22.526	5.6E-06	1.2E-05	1.6E-05	4.3E-06	2.4E-05	2.1E-02
Space Heaters	15.85	132.243	3.3E-05	7.3E-05	9.3E-05	2.5E-05	1.4E-04	1.2E-01
		Total:	0.00004	0.00010	0.00012	0.00003	0.00018	1.6E-01

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Heating Value of Natural Gas = 1050 MMBtu/MMCF
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * (8,760 hrs/yr) * (1 MMCF/1,050 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)
Potential Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * (1 ton/2,000 lb)

Degreasing

Number of Degreasers	Maximum Annual Capacity (gal/yr) each	% VOC	% HAP	Density (lb/gal)	PTE VOC (ton/yr)	PTE HAP (tetrachloroethene) (ton/yr)
2	145	100	0.2	6.7	0.972	0.1943

Methodology
PTE VOC (ton/yr) = Number of Degreasers * Maximum Annual Capacity (gal/yr) * %VOC * Density of Solvent (lb/gal) * (1 ton/2000 pounds)
PTE HAP (ton/yr) = Number of Degreasers * Maximum Annual Capacity (gal/yr) * %HAP * Density of Solvent (lb/gal) * (1 ton/2000 pounds)

SMAW Welding

Maximum Rod Usage (lb/yr)	Emission Factor (lb PM/lb Rod)	Emission Factor (lb total HAP/lb Rod)	Emission Factor (lb/Cr/lb Rod)	Emission Factor (lb Co/lb Rod)	Emission Factor (lb Mn/lb Rod)	Emission Factor (lb Ni/lb Rod)	Emission Factor (lb Pb/lb Rod)
10000	0.082	0.026	0.001	0.000001	0.023	0.0017	0.00016

PTE PM/PM10 (ton/yr)	PTE HAPs (ton/yr)	PTE Chromium (ton/yr)	PTE Cobalt (ton/yr)	PTE Manganese (ton/yr)	PTE Nickel (ton/yr)	PTE Lead (ton/yr)
0.408	0.132	0.007	0.000005	0.116	0.009	0.001

Methodology
Emission factors are the worst case SMAW emission factors from AP-42, Section 12.19 for each pollutant.
PTE (ton/yr) = Maximum Rod Usage (lb/yr) * Emission Factor (lb/lb Rod) * (1 lb/2000 lb)

Wet Cooling Towers

Capacity (gal/min)	PM/PM10 Emission Factor (lb/1,000 gal)	PM/PM10 Emissions (tons/yr)
65	0.019	0.325

Methodology
Emission factor from AP-42, Table 13.4-1
PM/PM10 Emissions (tons/yr) = Capacity (gal/min) * (60 min/hr) * (8760 hrs/yr) * Emission factor (lb/1000 gallons) * (1 ton/2000 lb)

Appendix A: Emission Calculations
Fugitive Emissions - Summary and Truck Loading/Unloading

Summary		
Fugitive Source	PTE (ton/yr)	
	PM	PM10
Truck Loading and Unloading	7.81	3.69
Sand Storage Piles	7.12	3.37
Unpaved Roads	0.827	0.253
Paved Roads	2.00	0.389
Total Fugitives	17.76	7.70

Truck Loading and Unloading

	Capacity (tons sand/hr)	PM Emissions (lbs/hr)	PM10 Emissions (lbs/hr)	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)
Truck Loading/Unloading	4.95	1.78	0.843	7.81	3.69
			Total	**7.81**	**3.69**

Emission Factor (lb/ton) = k x 0.0032 x ((U/5)^1.3)/((M/2)^1.4)

M (moisture content):	7.4%	
U (mean wind speed):	6.85	
k (Particle size multiplier):	0.74	PM
	0.35	PM10
PM Emission Factor (lb/ton) =	0.36	
PM10 Emission Factor (lb/ton) =	0.17	

Methodology:

The Emission Factor equation is from AP-42, Chapter 13.2.4

Emissions (lb/hr) = Capacity (ton/hr) * Emission Factor (lb/ton)
Emissions (ton/yr) = Emissions (lb/hr) * (8760 hr/yr) * (1 ton/2000 lb)

Appendix A: Emission Calculations
Fugitive Emissions: Sand Storage Piles

Sand Storage Piles

	Capacity (tons sand/yr)	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)
Sand Stoage Piles	39520	7.12	3.37

Emission Factor (lb/ton) = k x 0.0032 x ((U/5)^1.3)/((M/2)^1.4)

M (moisture content):	7.4%	
U (mean wind speed):	6.85	
k (Particle size multiplier):	0.74	PM
	0.35	PM10
PM Emission Factor (lb/ton) =	0.36	
PM10 Emission Factor (lb/ton) =	0.17	

Methodology

The Emission Factor equation is from AP-42, Chapter 13.2.4

Emissions (ton/yr) = Capacity (ton/hr) * Emission Factor (lb/ton) * (8760 hr/yr) * (1 ton/2000 lb)

Unpaved Roads

The following calculations determine the amount of emissions created by unpaved roads, based on AP-42, Ch 13.2.2 (12/2003)

391 miles per year

PM

Method 1a:

Ef = k*[(s/12)^0.9]*[(W/3)^b]

= 6.44 lb/mile

where k =	4.9	(particle size multiplier for PM)
s =	6	mean % silt content of unpaved roads
b =	0.45	Constant for PM-10 and PM-30 or TSP
W =	**22**	tons average vehicle weight
M =	0.2	surface material moisture content, % (default is 0.2 for dry conditions)

E = (6.44 lb/mi x 391 mi/yr) / 2000 lb/ton = **1.26** tons/yr

Taking natural mitigation due to precipitation into consideration:

Eext = E * [(365-p)/365] = **0.827** tons/yr

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

PM-10

Method 1a:

Ef = k*[(s/12)^0.9]*[(W/3)^b]

= 1.97 lb/mile

where k =	1.5	(particle size multiplier for PM-10)
s =	6	mean % silt content of unpaved roads
b =	0.45	Constant for PM-10 and PM-30 or TSP
W =	22	tons average vehicle weight
M =	0.2	surface material moisture content, % (default is 0.2 for dry conditions)

E = (1.97 lb/mi x 391 mi/yr) / 2000 lb/ton = **0.385** tons/yr

Taking natural mitigation due to precipitation into consideration:

Eext = E * [(365-p)/365] = **0.253** tons/yr

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

Paved Roads

The following calculations determine the amount of emissions created by unpaved roads, based on AP-42, Ch 13.2.1 (12/2003)

9201 miles per year

PM

Ef =	k*[(sL/2)^0.65]*[(W/3)^b] - C		
=	0.476	lb/mile	
where k =	0.082	(particle size multiplier for PM)	
sL =	9.7	silt loading of paved roads	
b =	1.5	Constant for PM-10 and PM-30 or TSP	
W =	**4.89**	tons average vehicle weight	
M =	0.2	surface material moisture content, % (default is 0.2 for dry conditions)	
C =	0.00047	Emission factor for 1980s vehicle fleet exhaust, break wear and tire wear	

$$E = \frac{0.476 \text{ lb/mi} \times 9201 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{2.19} \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

Eext = E * (1-p/(4x365)) = **2.00** tons/yr

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

PM-10

Ef =	k*[(sL/2)^0.65]*[(W/3)^b] - C		
=	0.092	lb/mile	
where k =	0.016	(particle size multiplier for PM-10)	
sL =	9.7	silt loading of paved roads	
b =	1.5	Constant for PM-10 and PM-30 or TSP	
W =	4.89	tons average vehicle weight	
M =	0.2	surface material moisture content, % (default is 0.2 for dry conditions)	
C =	0.00047	Emission factor for 1980s vehicle fleet exhaust, break wear and tire wear	

$$E = \frac{0.092 \text{ lb/mi} \times 9201 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{0.425} \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

Eext = E * (1-p/(4x365)) = **0.389** tons/yr

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

Limited Melt Rate: **24000**

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Scrap and Charge	24000	PM	0.60	1.64	7.2	none		1.64	7.2
Handling - Includes process emissions from the Scrap Charge Preheater		PM-10	0.36	0.99	4.32	none		0.99	4.32
Source of Criteria		SO2	0.00	0.00	0.00			0.00	0.00
Pollutant Factors:		NOx	0.00	0.00	0.00			0.00	0.00
SCC# 3-04-003-15		VOC	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		CO	0.00	0.00	0.00			0.00	0.00
AP-42 Ch. 12.10		chromium	7.7E-03	2.1E-02	9.3E-02	none		2.1E-02	9.3E-02
Fifth edition 1995 (2003 Update)		manganese	9.2E-03	2.5E-02	1.1E-01	none		2.5E-02	1.1E-01
HAPs based on		nickel	7.1E-03	1.9E-02	8.5E-02	none		1.9E-02	8.5E-02
lab analysis		Lead	1.4E-05	3.8E-05	1.6E-04	none		3.8E-05	1.6E-04

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Melting - Electric	24000	PM	0.90	2.47	10.8	none		2.47	10.8
Induction Furnace		PM-10	0.86	2.36	10.3	none		2.36	10.3
Source of Criteria		SO2	0.00	0.00	0.00			0.00	0.00
Pollutant Factors:		NOx	0.00	0.00	0.00			0.00	0.00
EPA SCC# 3-04-003-03		VOC	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		CO	0.00	0.00	0.00			0.00	0.00
AP-42 Ch. 12.10		chromium	1.2E-02	3.2E-02	0.14	none		3.2E-02	1.4E-01
Fifth edition 1995 (2003 Update)		manganese	1.4E-02	3.8E-02	0.17	none		3.8E-02	1.7E-01
HAPs based on		nickel	1.1E-02	2.9E-02	0.13	none		2.9E-02	1.3E-01
lab analysis		Lead	2.1E-05	5.6E-05	0.0002	none		5.6E-05	2.5E-04

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Magnesium Treatment	24000	PM	1.80	4.93	21.6	none		4.93	21.6
Source of Criteria		PM-10	1.80	4.93	21.6	none		4.93	21.6
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-21		VOC	0.00	0.00	0.0			0.000	0.000
AP-42 Ch 12.10		CO	0.00	0.00	0.0			0.00	0.00
Fifth edition 1995		Lead	0.00	0.000	0.0			0.000	0.000

Methodology
Ef = emission factor
Ebc = emissions before control
Eac = emissions after control
Ebc (ton/yr) = Rate (ton iron/yr) * Ef (lb/ton) * (1 ton/2000 lb)
Eac (ton/yr) = Ebc (ton/yr) * (1 - Control Efficiency)
Emissions (lb/yr) = Emissions (ton/yr) * (2000 lb/ton) * (1 yr/8760 hr)

Appendix A: Emission Calculations

Limited Emissions: Pouring, Cooling and Shakeout

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Pouring/Casting	24000	PM	0.20	0.55	2.40	none		0.55	2.40
Source of Criteria		PM-10	2.40	6.58	28.80	none		6.58	28.8
Pollutant Factors:		SO2	0.02	0.055	0.24	none		0.055	0.240
FIRE 6.25		NOx	0.01	0.027	0.12	none		0.027	0.120
SCC# 3-04-003-20 (SO2, NOx, and VOC); PM based on 7/24/03 test, validated 11/3/03, 0.162 lb PM/ton metal, rounded up to the next tenth for safety; PM10 based on Dec. 2003 test at Accurate Casting for Pouring and Cooling, 2.18 lb PM10/ton metal rounded up for safety, CO Factor based on 11/1/06 stack test for pouring, cooling and shakeout (result: 18.67 lb/ton, assume 2/3 is from pouring/cooling and 1/3 from shakeout); HAPs based on lab analysis.		VOC	0.14	0.384	1.68	none		0.384	1.68
		CO	12.45	34.10	149.36	none		34.10	149.36
		chromium	2.6E-03	7.1E-03	3.1E-02	none		7.1E-03	3.1E-02
		manganese	3.1E-03	8.4E-03	3.7E-02	none		8.4E-03	3.7E-02
		nickel	2.4E-03	6.5E-03	2.8E-02	none		6.5E-03	2.8E-02
		Lead	4.6E-06	1.3E-05	5.5E-05	none		1.3E-05	5.5E-05

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Castings Cooling	24000	PM	1.40	3.84	16.8	none		3.84	16.8
Source of Criteria		PM-10	PM10 emissions from pouring and cooling are combined under Pouring/Casting Calculations						
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-25		VOC	0.00	0.00	0.0			0.00	0.00
		CO	CO emissions from pouring and cooling are combined under Pouring/Casting Calculations						
		chromium	1.8E-02	4.9E-02	2.2E-01	none		4.9E-02	0.217
		manganese	2.2E-02	5.9E-02	2.6E-01	none		5.9E-02	0.259
HAPs based on lab analysis		nickel	1.7E-02	4.5E-02	2.0E-01	none		4.5E-02	0.198
		Lead	3.2E-05	8.8E-05	3.8E-04	none		8.8E-05	0.000

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Manual Shakeout	24000	PM	0.10	0.274	1.20	none		0.274	1.20
Source of Criteria		PM-10	0.10	0.274	1.20	none		0.274	1.20
Pollutant Factors:		SO2	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.00			0.00	0.00
SCC# 3-04-003-31 (VOC)		VOC	1.20	3.29	14.40	none		3.29	14.4
HAPs based on lab analysis; PM/PM10 factors based on 9/11/02 test, validated 12/19/02, 0.027 lb/ton PM & 0.081 lb/ton PM-10, rounded up to the next tenth; CO Factor based on 11/1/06 stack test for pouring, cooling and shakeout (result: 18.67 lb/ton, assume 2/3 is from pouring/cooling and 1/3 from shakeout)		CO	6.22	17.05	74.68	none		17.05	74.7
		chromium	1.3E-03	3.5E-03	1.5E-02	none		3.5E-03	1.5E-02
		manganese	1.5E-03	4.2E-03	1.8E-02	none		4.2E-03	1.8E-02
		nickel	1.2E-03	3.2E-03	1.4E-02	none		3.2E-03	1.4E-02
		Lead	2.3E-06	6.3E-06	2.7E-05	none		6.3E-06	2.7E-05

Process:	Limited Rate (tons iron/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Automatic Shakeout	24000	PM	3.20	8.767	38.40	fabric filter, K13	94.05%	0.522	2.28
Source of Criteria		PM-10	2.24	6.137	26.88	fabric filter, K13	94.05%	0.365	1.60
Pollutant Factors:		SO2	0.00	0.00	0.00			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.00			0.00	0.00
SCC# 3-04-003-31		VOC	1.20	3.29	14.40	none		3.29	14.4
AP-42 Ch. 12.10, Fifth edition 1995		CO	6.22	17.05	74.68	none		17.05	74.7
CO Factor based on 11/1/06 stack test for pouring, cooling and shakeout (result: 18.67 lb/ton, assume 2/3 is from pouring/cooling and 1/3 from shakeout); HAPs based on lab analysis		chromium	4.1E-02	1.1E-01	5.0E-01	fabric filter, K13	94.05%	6.7E-03	2.9E-02
		manganese	4.9E-02	1.4E-01	5.9E-01	fabric filter, K13	94.05%	8.0E-03	3.5E-02
		nickel	3.8E-02	1.0E-01	4.5E-01	fabric filter, K13	94.05%	6.2E-03	2.7E-02
		Lead	7.3E-05	2.0E-04	8.8E-04	fabric filter, K13	94.05%	1.2E-05	5.2E-05

Note: Additional HAPs emissions are shown on page 20
See p. 16 for Methodology

Process:	Rate cfm	Pollutant	Ef (gr/dscf)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Castings Cleaning	3000	PM	0.010	25.714	112.63	fabric filter, K1	99.00%	0.257	1.126
and Finishing (Shotblaster)		PM-10	0.010	25.714	112.63	fabric filter, K1	99.00%	0.257	1.126
Source of Criteria		SO2	0.00	0.000	0.00			0.000	0.000
Pollutant Factors:		NOx	0.00	0.000	0.00			0.000	0.000
PM/PM10 factors based on outlet grain loading		VOC	0.00	0.000	0.00			0.000	0.000
		CO	0.00	0.000	0.00			0.000	0.000
		chromium	1.3E-04	0.332	1.45	fabric filter, K1	99.00%	0.003	0.015
		manganese	1.5E-04	0.396	1.73	fabric filter, K1	99.00%	0.004	0.017
HAPs based on		nickel	1.2E-04	0.303	1.33	fabric filter, K1	99.00%	0.003	0.013
lab analysis		Lead	2.3E-07	0.001	0.003	fabric filter, K1	99.00%	0.00001	0.00003

The dust collector is considered integral to the process. Therefore, the unrestricted potential emissions are equal to the potential to emit after control.
The control efficiency is guaranteed by the vendor.

Process:	Limited Rate (tons metal/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Sand Handling	24000	PM	3.60	9.9	43.2	fabric filter, K13	94.05%	0.59	2.57
Source of Criteria Pollutant Factors:		PM-10	0.54	1.48	6.5	fabric filter, K13	94.05%	0.088	0.386
FIRE, SCC# 3-04-003-50									

Process:	Limited Rate (tons metal/yr)	Pollutant	Ef (lb/ton produced)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Cutoff saw	24000	PM	0.01	0.027	0.120	none		0.027	0.120
Source of Criteria		PM-10	0.0045	0.012	0.054	none		0.012	0.054
Pollutant Factors:									
FIRE 6.23									
EPA SCC# 3-04-003-60									

See page 16 for methodology for Shakeout, Sand Handling and Cutoff Saw

Methodology for Castings Cleaning

Eac (lb/hr) = Rate (cfm) * Ef (gr/dscf) * (60 min/hr) * (1 lb/7000 gr)
Ebc (lb/hr) = Eac / (1 - Control Efficiency)
Emissions (ton/yr) = Emissions (lb/hr) * (1 ton/2000 lb) * (8760 hr/yr)

Process:	Rate (tons sand/yr)	Pollutant	Ef (lb/ton)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Shell Mold Machines	24000.00	PM	1.10	3.01	13.2	none		3.01	13.2
Source of Criteria		PM-10	1.10	3.01	13.2	none		3.01	13.2
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-19		VOC	0.28	0.78	3.4	none		0.78	3.41
See below for VOC and Phenol Ef derivation		CO	0.00	0.00	0.0			0.00	0.00
		Phenol	0.20	0.56	2.45	none		0.56	2.45

Process:	Rate (tons sand/yr)	Pollutant	Ef (lb/ton)	Ebc (lbs/hr)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (lbs/hr)	Eac (ton/yr)
Shell Core Machines	2006.40	PM	1.10	0.25	1.1	none		0.25	1.1
Source of Criteria		PM-10	1.10	0.25	1.1	none		0.25	1.1
Pollutant Factors:		SO2	0.00	0.00	0.0			0.00	0.00
FIRE 6.25		NOx	0.00	0.00	0.0			0.00	0.00
SCC# 3-04-003-19		VOC	0.28	0.07	0.3	none		0.07	0.28
See below for VOC and Phenol Ef derivation		CO	0.00	0.00	0.0			0.00	0.00
		Phenol	0.20	0.05	0.2	none		0.05	0.20

Methodology
Ef = emission factor
Ebc = emissions before control
Eac = emissions after control
Ebc (ton/yr) = Rate (ton iron/yr) * Ef (lb/ton) * (1 ton/2000 lb)
Eac (ton/yr) = Ebc (ton/yr) * (1 - Control Efficiency)
Emissions (lb/yr) = Emissions (ton/yr) * (2000 lb/ton) * (1 yr/8760 hr)
VOC and Phenol Emission Factors
VOC emissions come from mold glue and from resin evaporation

VOC Ef = [Glue Usage Rate (6.8 lb glue/ton sand) * Worst Case Wt% VOC (0.03 lb VOC/lb glue) * Flash Off Factor (100%)] + [Wt Loss due to Resin Evaporation (0.00004 lb VOC/lb sand) * (2000 lb/ton)]
Phenol emissions come from mold glue
Phenol Ef = Glue Usage Rate (6.8 lb glue/ton sand) * Worst Case Wt% Phenol (0.03 lb Phenol/lb glue)
The 100% Flash Off Factor is conservative because it assumes all VOC from resin is emitted here, rather than some at pouring and shakeout.
The phenol emissions are conservative since 100% of phenol is assumed to evaporate at the molding and core making. The worst case between this value and the value calculated for pouring, cooling, and shakeout will be used for summary.

The weight loss for VOC emissions from resin evaporation was determined by manufacturer's tests of the weight loss due to heating pre-coated sand. The emission factor was approved by IDEM, OAQ on 10/6/2005.

HAPs Emissions from Pouring, Cooling and Shakeout based on Binder System

Annual Usage of Index Material

(lb/yr)	Binder System
2,280,000	Shell

HAP	Emission Factor (lb HAP released/lb index)	PTE (lb/yr)	PTE (ton/yr)
Acrolein	0.000047	107	0.054
Benzene*	0.000000977	2.23	0.001
Formaldehyde	0.000035	80	0.040
Hydrogen Cyanide*	0.00097	2207	1.10
M-Xylene	0.000585	1334	0.67
Naphthalene	0.000058	132	0.066
O-Xylene	0.000117	267	0.133
Phenol*	0.000395	900	0.450
Toluene*	0.00000124	2.83	0.001
Total Aromatic Amines	0.002339	5333	2.67
Total C2 to C5 Aldehydes	0.000585	1334	0.67
Total HAPs		11699	5.8

METHODOLOGY

The index material is the resin

Annual Usage of Index Material (lb/yr) = Maximum plant capacity (ton/yr) * (2000 lb/1 ton) * 0.0475 lb index/lb sand

PTE (lb/yr) = Annual Usage of Index Material (lb/yr) * Emission Factor (lb HAP released/lb Index Material)

PTE (ton/yr) = PTE (lb/yr) * (1 ton/2000 lb)

Emission Factors are from Calculating Emission Factors for Pouring, Cooling, and Shakeout, Gary E. Mosher, American Foundrymen's Society, Modern Casting, Oct. 1994

*Emission factors for Hydrogen Cyanide, Phenol, Toluene and Benzene are alternate emission factors approved by IDEM, OAQ, based on tests conducted at the source on 10/14/04 (10% safety factor applied).

Appendix A: Emission Calculations
Limited Emissions: Fugitive Emissions - Summary and Truck Loading/Unloading

Summary		
Fugitive Source	PTE (ton/yr)	
	PM	PM10
Truck Loading and Unloading	4.32	2.04
Sand Storage Piles	7.12	3.37
Unpaved Roads	0.827	0.253
Paved Roads	2.001	0.389
Total Fugitives	14.27	6.05

Truck Loading and Unloading

	Capacity (tons sand/hr)	PM Emissions (lbs/hr)	PM10 Emissions (lbs/hr)	PM Emissions (tons/yr)	PM10 Emissions (tons/yr)
Truck Loading/Unloading	2.74	0.99	0.467	4.32	2.04
			Total	**4.32**	**2.04**

Emission Factor (lb/ton) = k x 0.0032 x ((U/5)^1.3)/((M/2)^1.4)

M (moisture content):	7.4%	
U (mean wind speed):	6.85	
k (Particle size multiplier):	0.74	PM
	0.35	PM10
PM Emission Factor (lb/ton) =	0.36	
PM10 Emission Factor (lb/ton) =	0.17	

Methodology:

The Emission Factor equation is from AP-42, Chapter 13.2.4

Emissions (lb/hr) = Capacity (ton/hr) * Emission Factor (lb/ton)

Emissions (ton/yr) = Emissions (lb/hr) * (8760 hr/yr) * (1 ton/2000 lb)

Appendix A: Emission Calculations
326 IAC 6-3-2 Limits

Emission Unit	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Allowable Emissions (lb/hr)	Unlimited/ Uncontrolled PTE (lb/hr)	Unlimited/ Controlled PTE (lb/hr)	Capable of Compliance?	Need Control Device to Comply with 326 IAC 6-3-2?
Scrap/Charge Handling including Scrap Charge Preheater	4.95	11.97	2.97	2.97	yes	N/A
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr) (melting)	4.95	11.97	4.46	4.46	yes	N/A
Magnesium Treatment	4.95	11.97	8.91	8.91	yes	N/A
Pouring/Cooling - Power and Free Line	9.90	19.05	7.92	7.92	yes	N/A
One (1) Manual Shakeout	9.90	19.05	0.50	0.50	yes	N/A
One (1) Automated Shakeout	9.90	19.05	15.84	0.94	yes	no
Shotblast Machine (WHE02)	4.95	11.97	25.71	0.26	yes	yes
One (1) Sand Handling System	5.45	12.76	17.82	1.06	yes	yes
Mold Making Operations	5.03	12.10	5.53	5.53	yes	N/A
Truck Loading and Unloading	4.95	11.97	1.78	1.78	yes	N/A

History

Carbon monoxide emissions from pouring, cooling, and shakeout processes were previously unknown or unidentified. This PSD Lookback has been performed to evaluate any necessary throughput limits to render Prevention of Significant Deterioration (PSD) Best Available Control Technology analysis not applicable. In addition, actual melt rates have been used to determine if the Permittee exceeded any PSD thresholds.

Content of Appendix B

Page 2:	Actual Melt Rates and Pouring/Cooling Line Throughputs	This section shows information provided by the Permittee related to actual melt rates from 1974 to 2008 as provided by the Permittee. It also shows the split in throughput to the Turn 1, 2, and 3 Pouring/Cooling Turntables combined and the Power & Free Pouring/Cooling Conveyor Line, as applicable.
Pages 3-10:	Emission Unit History	This section lists the units that were existing as of August 1977 and provides a summary of each modification with units added and removed. It also provides maximum capacities, proposed limited capacities (as discussed in the PSD lookback), and actual rates.
Page 11:	Emission Factor Summary	This section provides a summary of emission factors used, their sources, and calculations to determine PTE.
Pages 12-23:	PSD Lookback	This section shows the PTE of the source as of August 1977. It also shows the PTE for each modification and where necessary, limited PTE/netting to make projects minor for PSD.

Actual Melt Rates and Pouring Cooling Line Throughputs by Year

Year	Actual Melt Rate (ton/yr)	2-Year Average for:	2-Year Average Melt (ton/yr)	Throughput to Turn 1, Turn 2, & Turn 3 (ton/yr)	Turn 1, Turn 2, & Turn 3 2-Year Average (ton/yr)	Throughput to Power & Free Line (ton/yr)	Power & Free 2-Year Average (ton/yr)
1974	4705			4705.0		0	
1975	2852	1974 & 1975	3778	2851.8	3778.4	0	
1976	3241	1975 & 1976	3046	3240.9	3046.3	0	
1977	3866	1976 & 1977	3553	3866.1	3553.5	0	
1978*	4993	1977 & 1978	4430	4993.0	4429.5	0	
1979*	5442	1978 & 1979	5217	5441.8	5217.4	0	
1980*	3948	1979 & 1980	4695	3948.4	4695.1	0	
1981	4651	1980 & 1981	4300	4651.2	4299.8	0	
1982	3090	1981 & 1982	3871	3090.2	3870.7	0	
1983*	4311	1982 & 1983	3700	4310.7	3700.4	0	
1984*	5960	1983 & 1984	5136	5960.3	5135.5	0	
1985	5115	1984 & 1985	5538	5114.9	5537.6	0	
1986*	5618	1985 & 1986	5366	5618.0	5366.4	0	
1987	5856	1986 & 1987	5737	5855.6	5736.8	0	
1988	7651	1987 & 1988	6753	7650.6	6753.1	0	
1989	7372	1988 & 1989	7511	7372.3	7511.5	0	
1990	8466	1989 & 1990	7919	8466.4	7919.3	0	
1991*	7512	1990 & 1991	7989	3756.1	6111.2	3756.1	
1992*	9276	1991 & 1992	8394	4638.2	4197.2	4638.2	4197.2
1993*	9601	1992 & 1993	9439	4800.3	4719.3	4800.3	4719.3
1994	12033	1993 & 1994	10817	6016.3	5408.3	6016.3	5408.3
1995*	12948	1994 & 1995	12490	6474.1	6245.2	6474.1	6245.2
1996	9852	1995 & 1996	11400	4925.8	5700.0	4925.8	5700.0
1997	10545	1996 & 1997	10198	5272.7	5099.2	5272.7	5099.2
1998	12360	1997 & 1998	11453	6179.9	5726.3	6179.9	5726.3
1999*	11172	1998 & 1999	11766	5585.8	5882.8	5585.8	5882.8
2000*	11017	1999 & 2000	11094	5508.5	5547.1	5508.5	5547.1
2001	8545	2000 & 2001	9781	4272.4	4890.4	4272.4	4890.4
2002	9379	2001 & 2002	8962	4689.3	4480.8	4689.3	4480.8
2003	11859	2002 & 2003	10619	5929.7	5309.5	5929.7	5309.5
2004*	12610	2003 & 2004	12235	3152.5	4541.1	9457.5	7693.6
2005	15679	2004 & 2005	14145	0.0	1576.3	15679.3	12568.4
2006*	15357	2005 & 2006	15518	0.0	0.0	15357.3	15518.3
2007	14946	2006 & 2007	15152	0.0	0.0	14946.0	15151.6
2008	12352	2007 & 2008	13649	0.0	0.0	12352.0	13649.0

*Years where modifications where made

Emission Unit History and Summary of Modifications, Maximum Capacities, Proposed Limited Capacities, and Actual Rates
(Emission units in **bold** were added during the given year and emission units in ~~strikeout~~ were removed during the given year.)

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
Existing Configuration in August 1977				
Scrap/Charge Handling	43,800.00			3866
Preheater		2.20		
One (1) 5.0 ton EIF	43,800.00			3866
Magnesium Treatment	43,800.00			3866
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			3866
One (1) Manual Shakeout	43,800.00			3866
Two (2) Blast Machines	43,800.00			3866
One (1) Cutoff Saw	43,800.00			3866
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			4253
Five (5) Shell Mold Machines @ 700 pounds sand each	44,494.23			3927
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		5.00		
Three (3) Shell Core Machines	3,685.77			325
Two (2) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		0.44		
Insignificant Activities				
1978 Modification				
Modification Description: Added 1 Shell Mold Machine at 700 pounds sand (included in existing Mold Machines maximum capacity) and 1 shell mold machine oven				
Scrap/Charge Handling	43,800.00			4993
Preheater		2.20		
One (1) 5.0 ton EIF	43,800.00			4993
Magnesium Treatment	43,800.00			4993
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			4993
One (1) Manual Shakeout	43,800.00			4993
Two (2) Blast Machines	43,800.00			4993
One (1) Cutoff Saw	43,800.00			4993
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			5492
Five (5) Shell Mold Machines @ 700 pounds sand each	44,494.23			5072
One (1) Shell Mold Machine @ 700 pounds sand				
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		5.00		
One (1) Shell Mold Machine Oven		**1.00**		
Three (3) Shell Core Machines	3,685.77			420
Two (2) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		0.44		
Insignificant Activities				

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
1979 Modification				
Modification Description: Added 1 Shell Core Machine at 300 pounds sand (included in existing Core Machines maximum capacity) and 1 shell core machine oven				
Scrap/Charge Handling	43,800.00			5442
Preheater		2.20		
One (1) 5.0 ton EIF	43,800.00			5442
Magnesium Treatment	43,800.00			5442
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			5442
One (1) Manual Shakeout	43,800.00			5442
Two (2) Blast Machines	43,800.00			5442
One (1) Cutoff Saw	43,800.00			5442
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			5986
Six (6) Shell Mold Machines @ 700 pounds sand each	44,494.23			5528
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		6.00		
Three (3) Shell Core Machines	3,685.77			458
Two (2) Shell Core Machines @ 300 pounds sand each				
One (1) Shell Core Machines @ 300 pounds sand				
Shell Core Machine Ovens		0.44		
One (1) Shell Core Machine Oven		**0.22**		
Insignificant Activities				
1980 Modification				
Modification Description: Added 1 Pouring/Cooling Turntable, replaced Manual Shakeout, added 1 Shell Mold Machine at 700 pounds, 1 Shell Core Machine at 300 pounds (new units are included in existing maximum capacities), 1 shell mold machine oven, and 1 shell core machine oven				
Scrap/Charge Handling	43,800.00			3948
Preheater		2.20		
One (1) 5.0 ton EIF	43,800.00			3948
Magnesium Treatment	43,800.00			3948
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			3948
One (1) Pouring/Cooling Turntable - Turn 3			8800	
~~One (1) Manual Shakeout~~	~~43,800.00~~			
One (1) Manual Shakeout	**43,800.00**			3948
Two (2) Blast Machines	43,800.00			3948
One (1) Cutoff Saw	43,800.00			3948
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			4343
Six (6) Shell Mold Machines @ 700 pounds sand each	44,494.23			4011
One (1) Shell Mold Machines @ 700 pounds sand				
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		6.00		
One (1) Shell Mold Machine Oven		**1.00**		
Three (3) Shell Core Machines	3,685.77			332
Three (3) Shell Core Machines @ 300 pounds sand each				
One (1) Shell Core Machines @ 300 pounds sand				
Shell Core Machine Ovens		0.66		
One (1) Shell Core Machine Oven		**0.22**		
Insignificant Activities				

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
1981 - No Modification				4651
1982 - No Modification				3090
1983 Modification				
Modification Description: Removed the 2 Blast Machines and replaced with 1 Shot Blast Machine, added 2 Shell Mold Machines at 700 pounds each, added 2 Shell Core Machines at 300 pounds each (new units are included in existing maximum capacities), added 2 shell mold machine ovens and 2 shell core machine ovens				
Scrap/Charge Handling	43,800.00			4311
Preheater		2.20		
One (1) 5.0 ton EIF	43,800.00			4311
Magnesium Treatment	43,800.00			4311
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			4311
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Manual Shakeout	43,800.00			4311
~~Two (2) Blast Machines~~	~~43,800.00~~			
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	**43,800.00**			4311
One (1) Cutoff Saw	43,800.00			4311
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			4742
Seven (7) Shell Mold Machines @ 700 pounds sand each	44,494.23			4379
Two (2) Shell Mold Machines @ 700 pounds sand each				
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		7.00		
Two (2) Shell Mold Machine Oven		**2.00**		
Three (3) Shell Core Machines	3,685.77			393
Four (4) Shell Core Machines @ 300 pounds sand each				
Two (2) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		0.88		
Two (2) Shell Core Machine Oven		**0.44**		
Insignificant Activities				
1984 Modification				
Modification Description: Removed the 1 5.0 ton EIF and replaced with 2 2.5 ton EIFs				
Scrap/Charge Handling	43,800.00			5960
Preheater		2.20		
~~One (1) 5.0 ton EIF~~	~~43,800.00~~			
Two (2) 2.5 ton EIFs	**43,800.00**		24000	5960
Magnesium Treatment	43,800.00			5960
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			5960
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Manual Shakeout	43,800.00			5960
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			5960
One (1) Cutoff Saw	43,800.00			5960
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			6556
Nine (9) Shell Mold Machines @ 700 pounds sand each	44,494.23			6055
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		9.00		
Three (3) Shell Core Machines	3,685.77			463
Six (6) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Insignificant Activities				

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
1985 - No Modification				5115
1986 Modification				
Modification Description: Added 2 Shell Mold Machines at 700 pounds each (included in existing maximum capacity) and 2 shell mold machine ovens				
Scrap/Charge Handling	43,800.00			5618
Preheater		2.20		
Two (2) 2.5 ton EIFs	43,800.00		24000	5618
Magnesium Treatment	43,800.00			5618
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			5618
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Manual Shakeout	43,800.00			5618
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			5618
One (1) Cutoff Saw	43,800.00			5618
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			6180
Nine (9) Shell Mold Machines @ 700 pounds sand each	44,494.23			5707
Two (2) Shell Mold Machines @ 700 pounds sand each				
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		9.00		
Two (2) Shell Mold Machine Oven		**2.00**		
Three (3) Shell Core Machines	3,685.77			473
Six (6) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Insignificant Activities				
1987 - No Modification				5856
1988 - No Modification				7651
1989 - No Modification				7372
1990 - No Modification				8466
1991 Modification				
Modification Description: Added 1 Power & Free Pouring/Cooling Conveyor Line (included in existing maximum capacity)				
Scrap/Charge Handling	43,800.00			7512
Preheater		2.20		
Two (2) 2.5 ton EIFs	43,800.00		24000	7512
Magnesium Treatment	43,800.00			7512
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			3756
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line			12450	3756
One (1) Manual Shakeout	43,800.00			7512
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			7512
One (1) Cutoff Saw	43,800.00			7512
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			8263
Eleven (11) Shell Mold Machines @ 700 pounds sand each	44,494.23			7631
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		11.00		
Three (3) Shell Core Machines	3,685.77			632
Six (6) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Insignificant Activities				

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
1992 Modification				
Modification Description: Added 2 Shell Mold Machines at 700 pounds each (included in existing maximum capacity) and 2 shell mold machine ovens				
Scrap/Charge Handling	43,800.00			9276
Preheater		2.20		
Two (2) 2.5 ton EIFs	43,800.00		24000	9276
Magnesium Treatment	43,800.00			9276
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			4638
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line			12450	4638
One (1) Manual Shakeout	43,800.00			9276
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			9276
One (1) Cutoff Saw	43,800.00			9276
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			10204
Eleven (11) Shell Mold Machines @ 700 pounds sand each	44,494.23			9423
Two (2) Shell Mold Machines @ 700 pounds sand each				
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		11.00		
Two (2) Shell Mold Machine Oven		**2.00**		
Three (3) Shell Core Machines	3,685.77			781
Six (6) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Insignificant Activities				
1993 Modification				
Modification Description: Added 2 Shell Mold Machines at 700 pounds each (included in existing maximum capacity) and 2 shell mold machine ovens				
Scrap/Charge Handling	43,800.00			9601
Preheater		2.20		
Two (2) 2.5 ton EIFs	43,800.00		24000	9601
Magnesium Treatment	43,800.00			9601
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			4800
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line			12450	4800
One (1) Manual Shakeout	43,800.00			9601
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			9601
One (1) Cutoff Saw	43,800.00			9601
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			10561
Thirteen (13) Shell Mold Machines @ 700 pounds sand each	44,494.23			9753
Two (2) Shell Mold Machines @ 700 pounds sand each				
Thirteen (13) Shell Mold Machines				
Shell Mold Machine Ovens		13.00		
Two (2) Shell Mold Machine Oven		**2.00**		
Three (3) Shell Core Machines	3,685.77			808
Six (6) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Insignificant Activities				
1994 - No Modification			Actuals: 12033 (6016 for Turn 1, 2, 3; 6016 for Power & Free)	

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
1995 Modification				
Modification Description: Removed 13 Shell Mold Machines, added 4 Shell Mold Machines at 700 pounds each (included in existing maximum capacity) and 4 shell mold machine ovens				
Scrap/Charge Handling	43,800.00			12948
Preheater		2.20		
Two (2) 2.5 ton EIFs	43,800.00		24000	12948
Magnesium Treatment	43,800.00			12948
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			6474
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line			12450	6474
One (1) Manual Shakeout	43,800.00			12948
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			12948
One (1) Cutoff Saw	43,800.00			12948
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			14243
Fifteen (15) Shell Mold Machines @ 700 pounds sand each	44,494.23			13154
Four (4) Shell Mold Machines @ 700 pounds sand each				
~~Thirteen (13) Shell Mold Machines~~				
Shell Mold Machine Ovens		15.00		
Four (4) Shell Mold Machine Oven		**4.00**		
Three (3) Shell Core Machines	3,685.77			1090
Six (6) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Insignificant Activities				
1996 - No Modification			Actuals: 9852 (4926 for Turn 1, 2, 3; 4926 for Power & Free)	
1997 - No Modification			Actuals: 10545 (5273 for Turn 1, 2, 3; 5273 for Power & Free)	
1998 - No Modification			Actuals: 12360 (6180 for Turn 1, 2, 3; 6180 for Power & Free)	
1999 Modification				
Modification Description: Removed 3 Shell Core Machines, added 2 Shell Core Machines at 300 pounds each and 1 Shell Mold Machine at 700 pounds (included in existing maximum capacity), added 2 shell core machine ovens and 1 shell mold machine oven				
Scrap/Charge Handling	43,800.00			11172
Preheater		2.20		
Two (2) 2.5 ton EIFs	43,800.00		24000	11172
Magnesium Treatment	43,800.00			11172
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00			5586
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line			12450	5586
One (1) Manual Shakeout	43,800.00			11172
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,800.00			11172
One (1) Cutoff Saw	43,800.00			11172
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	48,180.00			12289
Nineteen (19) Shell Mold Machines @ 700 pounds sand each	44,494.23			11349
One (1) Shell Mold Machines @ 700 pounds sand				
Shell Mold Machine Ovens		19.00		
One (1) Shell Mold Machine Oven		**1.00**		
~~Three (3) Shell Core Machines~~	3,685.77			940
Six (6) Shell Core Machines @ 300 pounds sand each				
Two (2) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.32		
Two (2) Shell Core Machine Oven		**0.44**		
Insignificant Activities				

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
2000 Modification				
Modification Description: Removed 2 2.5 ton EIFs, replaced with 2 new 2.5 ton EIFs (4.95 ton/hr total), which slightly lowers maximum capacity of other units				
Scrap/Charge Handling	~~43,800.00~~ **43,362.00**			11017
Preheater		2.20		
~~Two (2) 2.5 ton EIFs~~	~~43,800.00~~			
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr)	**43,362.00**		24000	11017
Magnesium Treatment	~~43,800.00~~ **43,362.00**			11017
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	~~43,800.00~~ **43,362.00**			5508
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line			12450	5508
One (1) Manual Shakeout	~~43,800.00~~ **43,362.00**			11017
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	~~43,800.00~~ **43,362.00**			11017
One (1) Cutoff Saw	~~43,800.00~~ **43,362.00**			11017
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	~~48,180.00~~ **47,698.20**			12119
Twenty (20) Shell Mold Machines @ 700 pounds sand each	~~44,494.23~~ **44,073.14**			11198
Shell Mold Machine Ovens		20.00		
Eight (8) Shell Core Machines @ 300 pounds sand each	~~3,685.77~~ **3,625.06**			921
Shell Core Machine Ovens		1.76		
Insignificant Activities				
2001 - No Modification			Actuals: 8545 (4272 for Turn 1, 2, 3; 4272 for Power & Free)	
2002 - No Modification			Actuals: 9379 (4689 for Turn 1, 2, 3; 4689 for Power & Free)	
2003 - No Modification			Actuals: 11859 (5930 for Turn 1, 2, 3; 5930 for Power & Free)	
2004 Modification				
Modification Description: Modified the Power & Free Pouring/Cooling Conveyor Line to extend the cooling conveyor				
Scrap/Charge Handling	43,362.00			12610
Preheater		2.20		
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr)	43,362.00		24000	12610
Magnesium Treatment	43,362.00			12610
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,362.00			3153
One (1) Pouring/Cooling Turntable - Turn 3			8800	
One (1) Power & Free Pouring/Cooling Conveyor Line (extended cooling conveyor)			24000	9458
One (1) Manual Shakeout	43,362.00			12610
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,362.00			12610
One (1) Cutoff Saw	43,362.00			12610
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	47,698.20			13871
Twenty (20) Shell Mold Machines @ 700 pounds sand each	44,073.14			12817
Shell Mold Machine Ovens		20.00		
Eight (8) Shell Core Machines @ 300 pounds sand each	3,625.06			1054
Shell Core Machine Ovens		1.76		
Insignificant Activities				

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/hour)	Proposed Limited Capacity (ton/yr)	Actual Rate (ton/yr)
2005 - No Modification			Actuals: 15679 (0 for Turn 1, 2, 3; 15679 for Power & Free)	
2006 Modification				
Modification Description: Added Automated Shakeout, removed Pouring/Cooling Turntables - Turn 1 & Turn 2				
Scrap/Charge Handling	43,362.00			15357
Preheater		2.20		
Two (2) 2.5 ton EIFs #3 & #4 (4.95 tons/hr)	43,362.00		24000	15357
Magnesium Treatment	43,362.00			15357
~~Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2~~	43,362.00		0	
One (1) Pouring/Cooling Turntable - Turn 3			0	0
One (1) Power & Free Pouring/Cooling Conveyor Line			24000	12352
One (1) Manual Shakeout	43,362.00			15357
One (1) Automated Shakeout	43,362.00		24000	15357
One (1) Shot Blast Machine (integral dust collector - 3,000 cfm)	43,362.00			15357
One (1) Cutoff Saw	43,362.00			15357
One (1) Sand Handling System (1.1 : 1.0 sand to metal ratio)	47,698.20			16893
Twenty (20) Shell Mold Machines @ 700 pounds sand each	44,073.14			15609
Shell Mold Machine Ovens		20.00		
Eight (8) Shell Core Machines @ 300 pounds sand each	3,625.06			1284
Four (4) Shell Core Machines @ 300 pounds sand each				
Shell Core Machine Ovens		1.76		
Four (4) Shell Core Machine Oven		**0.88**		
Insignificant Activities				
2007 - No Modification			Actuals: 14946 (0 for Turn 1, 2, 3; 14946 for Power & Free)	
2008 - No Modification			Actuals: 12352 (0 for Turn 1, 2, 3; 12352 for Power & Free)	

Emission Factor Summary

Emission Units	Emission Factors								PTE Calculation
	PM	PM10	VOC	CO	NOx	SO2	EF Units	EF Source	
Scrap/Charge Handling	0.6	0.36	0	0	0	0	lb/ton metal	SCC# 3-04-003-15	[1]
Preheater	1.9	7.6	5.5	84	100	0.6	lb/MMCF	SCC# 1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03	[2]
EIFs	0.9	0.86	0	0	0	0	lb/ton metal	SCC# 3-04-003-03	[1]
Magnesium Treatment	1.8	1.8	0	0	0	0	lb/ton metal	SCC# 3-04-003-21	[1]
Pouring/Cooling (used for all lines - Turn 1, Turn 2, Turn 3, and Power & Free)	1.6	2.4	0.14	12.447	0.01	0.02	lb/ton metal	PM: Testing on Pouring/Casting on 7/24/03 + SCC# 3-04-003-25 for Casting Cooling; PM10: Testing at Accurate Casting in Dec 2003; VOC/SO2/Nox: SCC# 3-04-003-20 for Pouring/Casting; CO: Testing on Pouring/Cooling/Shakeout 11/12006 (assume 2/3 CO for pouring and cooling, 1/3 CO for shakeout)	[1]
Manual Shakeout	0.1	0.1	1.2	6.22	0	0	lb/ton metal	PM/PM10: Testing on 9/11/02; VOC: SCC# 3-04-003-31; CO: testing for Pouring/Cooling/Shakeout on 11/1/2006 (assume 1/3 CO for Shakeout)	[1]
Automatic Shakeout	3.20	2.24	1.2	6.22	0	0	lb/ton metal	PM, PM10, VOC: SCC# 3-04-003-31; CO: testing for Pouring/Cooling/Shakeout on 11/1/2006 (assume 1/3 CO for Shakeout)	[1]
Blast Machines (original)	17	1.7	0	0	0	0	lb/ton metal	SCC# 3-04-003-40	[1]
Blast Machine (added in 1983) - integral dust collector	0.01	0.01	0.00	0.00	0.00	0.00	gr/dscf (outlet grain loading)	Dust collector design	[3]
Cutoff Saw	0.01	0.0045	0	0	0	0	lb/ton metal	SCC# 3-04-003-60	[1]
Sand Handling System	3.60	0.54	0	0	0	0	lb/ton metal	SCC# 3-04-003-50	[1]
Shell Mold Machines	1.1	1.1	0.305	0	0	0	lb/ton sand	PM/PM10: SCC# 3-04-003-19; VOC: Based on release from glue and resin	[1]
Shell Mold Machine Ovens	1.9	7.6	5.5	84	100	0.6	lb/MMCF	SCC# 1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03	[2]
Shell Core Machines	1.1	1.1	0.305	0	0	0	lb/ton sand	PM/PM10: SCC# 3-04-003-19; VOC: Based on release from glue and resin	[1]
Shell Core Machine Ovens	1.9	7.6	5.5	84	100	0.6	lb/MMCF	SCC# 1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03	[2]

[1] PTE (ton/yr) = Capacity (ton/yr) x Emission Factor (lb/ton) x (1 ton/2000 lb)
[2] PTE (ton/yr) = Capacity (MMBtu/hr) x Emission Factor (lb/MMCF) x (8760 hr/yr) x (1 ton/2000 lb) / Heating Value (1 MMCF/1000 MMBtu)
[3] PTE (ton/yr) = Airflow (cfm) x Outlet Grain Loading (gr/cf) x (60 min/hr) x (8760 hr/yr) x (1 lb/7000 gr) x (1 ton/2000 lb)
Controlled Emissions = Uncontrolled PTE x (1 - Control Efficiency)

PTE Based on Maximum Throughput for Exising Units in August 1977

Emission Units	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled PTE (ton/yr)		Control	Control Efficiency	Controlled PTE (ton/yr)					
Existing Configuration in August 1977	43,800.00		**PM**	**PM10**	**VOC**	**CO**	**NOx**	**SO2**	**EF Units**	**PM**	**PM10**			**PM**	**PM10**	**VOC**	**CO**	**NOx**	**SO2**
Scrap/Charge Handling	43,800.00		0.6	0.36	0	0	0	0	lb/ton metal	13.14	7.88	None		13.14	7.88	0.00	0.00	0.00	0.00
Preheater		2.20	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.018	0.073	None		0.02	0.07	0.05	0.81	0.96	0.01
One (1) 5.0 ton EIF	43,800.00		0.9	0.86	0	0	0	0	lb/ton metal	19.71	18.83	None		19.71	18.83	0.00	0.00	0.00	0.00
Magnesium Treatment	43,800.00		1.8	1.8	0	0	0	0	lb/ton metal	39.42	39.42	None		39.42	39.42	0.00	0.00	0.00	0.00
Two (2) Pouring/Cooling Turntables - Turn 1 & Turn 2	43,800.00		1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	35.04	52.56	None		35.04	52.56	3.07	272.58	0.22	0.44
One (1) Manual Shakeout	43,800.00		0.1	0.1	1.2	6.223	0	0	lb/ton metal	2.19	2.19	None		2.19	2.19	26.28	136.29	0.00	0.00
Two (2) Blast Machines	43,800.00		17	1.7	0	0	0	0	lb/ton metal	372.30	37.23	PM/PM10: Fabric Filter	94.90%	18.99	1.90	0.00	0.00	0.00	0.00
One (1) Cutoff Saw	43,800.00		0.01	0.0045	0	0	0	0	lb/ton metal	0.219	0.099	None		0.22	0.10	0.00	0.00	0.00	0.00
One (1) Sand Handling System	43,800.00		3.60	0.54	0	0	0	0	lb/ton metal	78.84	11.83	PM/PM10: Fabric Filter	94.05%	4.69	0.70	0.00	0.00	0.00	0.00
Five (5) Shell Mold Machines @ 700 pounds sand each	44,494.23		1.1	1.1	0.305	0	0	0	lb/ton sand	24.47	24.47	None		24.47	24.47	6.79	0.00	0.00	0.00
Thirteen (13) Shell Mold Machines																			
Shell Mold Machine Ovens		5.00	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.04	0.17	None		0.04	0.17	0.12	1.84	2.19	0.01
Three (3) Shell Core Machines	3,685.77		1.1	1.1	0.305	0	0	0	lb/ton sand	2.03	2.03	None		2.03	2.03	0.56	0.00	0.00	0.00
Two (2) Shell Core Machines @ 300 pounds sand each																			
Shell Core Machine Ovens		0.44	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.004	0.015	None		0.00	0.01	0.01	0.16	0.19	0.00
Insignificant Activities										14.27	6.99	None		14.27	6.99	1.42	6.83	8.13	0.05
Total (ton/yr)										601.69	203.78			174.23	157.33	38.30	418.51	11.69	0.51
PSD Major Source Threshold														100	100	100	100	100	100

1977 Source Status

In August of 1977, this source would have been an existing major source pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) because the controlled PTE of PM and CO exceeded 100 tons per year and this source is 1 of 28 source categories. Subsequent modifications would have been compared to PSD significant levels. Note: PM10 was not regulated at this date.

1978 Modification

Modification Description: Added 1 Shell Mold Machine at 700 pounds sand and 1 shell mold machine oven

Emission Units - 1978 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Shell Mold Machine @ 700 pounds sand	**3,066.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	1.69	1.69	None		1.69	1.69	0.47	0.00	0.00	0.00
One (1) Shell Mold Machine Oven		**1.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.01	0.03	None		0.01	0.03	0.02	0.37	0.44	0.003
PTE from Modification										1.695	1.720			1.69	1.72	0.49	0.37	0.44	0.003
PSD Significant Level														25	15	40	100	40	40

1978 Project Status

The increase in potential emissions from the 1978 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

1979 Modification

Modification Description: Added 1 Shell Core Machine at 300 pounds sand and one shell core machine oven

Emission Units - 1979 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled PTE (ton/yr)		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Shell Core Machines @ 300 pounds sand	**1,314.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	0.72	0.72	None		0.72	0.72	0.20	0.00	0.00	0.00
One (1) Shell Core Machine Oven		**0.22**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.002	0.007	None		0.002	0.01	0.01	0.08	0.10	0.00
PTE from Modification										0.725	0.730			0.72	0.73	0.21	0.08	0.10	0.001
PSD Significant Level														25	15	40	100	40	40

1979 Project Status

The increase in potential emissions from the 1979 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

1980 Modification

Modification Description: Replaced Manual Shakeout, added 1 Pouring/Cooling Turntable, 1 Shell Mold Machine at 700 pounds, 1 shell mold machine oven, 1 Shell Core Machine at 300 pounds, and 1 shell core machine oven

Emission Units - 1980 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Pouring/Cooling Turntable - Turn 3	**43,800.00**		1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	35.04	52.56	None		35.04	52.56	3.07	272.58	0.22	0.44
~~One (1) Manual Shakeout~~																			
One (1) Manual Shakeout	**43,800.00**		0.1	0.1	1.2	6.223	0	0	lb/ton metal	2.19	2.19	None		2.19	2.19	26.28	136.29	0.00	0.00
One (1) Shell Mold Machines @ 700 pounds sand	**3,066.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	1.69	1.69	None		1.69	1.69	0.47	0.00	0.00	0.00
One (1) Shell Mold Machine Oven		**1.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.01	0.03	None		0.01	0.03	0.00	0.00	0.00	0.00
One (1) Shell Core Machines @ 300 pounds sand	**1,314.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	0.72	0.72	None		0.72	0.72	0.20	0.00	0.00	0.00
One (1) Shell Core Machine Oven		**0.22**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.002	0.007	None		0.002	0.007	0.00	0.00	0.00	0.00
PTE from Modification										39.65	57.20			39.65	57.20	30.01	408.87	0.22	0.44
PSD Significant Level														25	15	40	100	40	40

1980 Project Status

The increase in PTE from this modification is greater than the PSD significant level for PM, PM10, and CO (note, however, PM10 did not become regulated under PSD until 7/31/1987). The Permittee has proposed to include a limit for Pouring/Cooling Turntable - Turn 3 of 8,800 ton/yr metal to keep the 1980 project minor for PSD. The decrease in potential emissions from the removal of the existing shakeout unit will also be considered. The table below shows the limited PTE of the project.

Emission Units - 1980 Mod (Limited)	Limited Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Pouring/Cooling Turntable - Turn 3	**8,800.00**		1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	7.04	10.56	None		7.04	10.56	0.62	54.77	0.04	0.09
~~One (1) Manual Shakeout~~	-43,800.00		0.1	0.1	1.2	6.223	0	0	lb/ton metal	-2.19	-2.19	None		-2.19	-2.19	-26.28	-136.29	0.00	0.00
One (1) Manual Shakeout	**43,800.00**		0.1	0.1	1.2	6.223	0	0	lb/ton metal	2.19	2.19	None		2.19	2.19	26.28	136.29	0.00	0.00
One (1) Shell Mold Machines @ 700 pounds sand	**3,066.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	1.69	1.69	None		1.69	1.69	0.47	0.00	0.00	0.00
One (1) Shell Mold Machine Oven		**1.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.01	0.03	None		0.01	0.03	0.00	0.00	0.00	0.00
One (1) Shell Core Machines @ 300 pounds sand	**1,314.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	0.72	0.72	None		0.72	0.72	0.20	0.00	0.00	0.00
One (1) Shell Core Machine Oven		**0.22**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.002	0.007	None		0.002	0.007	0.00	0.00	0.00	0.00
PTE from Modification (Limited)										9.46	13.01			9.46	13.01	1.28	54.77	0.04	0.09
PSD Significant Level														25	15	40	100	40	40

1980 Project Status After Limits

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Actual Throughput for Pouring/Cooling Turntable - Turn 3

Based on actual rates supplied by the Permittee, the total metal throughput to Turn 1, Turn 2, and Turn 3 combined has never exceeded 8,800 tons per year. Therefore, a PSD BACT analysis is not necessary for the 1980 project.

1983 Modification

Modification Description: Removed the 2 Blast Machines and replaced with 1 Shot Blast Machine, added 2 Shell Mold Machines at 700 pounds each, 2 shell mold machine ovens, 2 Shell Core Machines at 300 pounds each, and 2 shell core machine ovens

Emission Units - 1983 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~Two (2) Blast Machines~~																			
One (1) Shot Blast Machine	**3000 cfm**		0.01	0.01	0.00	0.00	0.00	0.00	gr/dscf (outlet grain loading)	112.63	112.63	PM/PM10: Fabric Filter	99.00%	1.13	1.13	0.00	0.00	0.00	0.00
Two (2) Shell Mold Machines @ 700 pounds sand each	**6,132.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	3.37	3.37	None		3.37	3.37	0.94	0.00	0.00	0.00
Two (2) Shell Mold Machine Oven		**2.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.017	0.067	None		0.017	0.067	0.05	0.74	0.88	0.01
Two (2) Shell Core Machines @ 300 pounds sand each	**2,628.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	1.45	1.45	None		1.45	1.45	0.40	0.00	0.00	0.00
Two (2) Shell Core Machine Oven		**0.44**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.004	0.015	None		0.004	0.015	0.01	0.16	0.19	0.00
PTE from Modification										117.47	117.53			5.96	6.03	1.39	0.90	1.07	0.01
PSD Significant Levels														25	15	40	100	40	40

1983 Project Status

The increase in potential emissions from the 1983 modification is less than the PSD significant levels after particulate control of the shot blast machine. The particulate control device for the shot blast machine must be used at all times that the unit is operation to render PSD not applicable to the 1983 project.

1984 Modification

Modification Description: Removed the 1 5.0 ton EIF and replaced with 2 2.5 ton EIFs

Emission Units - 1984 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~One (1) 5.0 ton EIF~~																			
Two (2) 2.5 ton EIFs	**43,800.00**		0.9	0.86	0	0	0	0	lb/ton metal	19.71	18.83	None		19.71	18.83	0.00	0.00	0.00	0.00
PTE from Modification										19.71	18.83			19.71	18.83	0.00	0.00	0.00	0.00
PSD Significant Levels														25	15	40	100	40	40

1984 Project Status

The unlimited PTE of the 1984 modification EIFs exceeds the PSD significant levels for PM10; however, PM10 was not regulated under PSD until July 31, 1987. The permittee has proposed a melt rate limit on the 1984 EIFs of 24,000 ton/yr, however. The calculations based on the limited melt rate are shown in the table below.

Emission Units - 1984 Mod (limited)	Limited Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~One (1) 5.0 ton EIF~~																			
Two (2) 2.5 ton EIFs	**24,000.00**		0.9	0.86	0	0	0	0	lb/ton metal	10.80	10.32	None		10.80	10.32	0.00	0.00	0.00	0.00
PTE from Modification										10.80	10.32			10.80	10.32	0.00	0.00	0.00	0.00
PSD Significant Levels														25	15	40	100	40	40

1984 Project Status After Limits

The Permittee has proposed a melt rate limit for the 1984 EIFs. The metal throughput to the two (2) EIFs shall be limited to 24,000 tons per twelve (12) consecutive month period.

Actual Melt Rate for EIFs

Based on actual melt rates supplied by the Permittee, the total metal melt rate has never exceeded 24,000 tons per year.

1986 Modification

Modification Description: Added 2 Shell Mold Machines at 700 pounds each and 2 shell mold machine ovens

Emission Units - 1986 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
Two (2) Shell Mold Machines @ 700 pounds sand each	**6,132.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	3.37	3.37	None		3.37	3.37	0.94	0.00	0.00	0.00
Two (2) Shell Mold Machine Oven		**2.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.017	0.067	None		0.017	0.067	0.05	0.74	0.88	0.01
PTE from Modification										3.39	3.44			3.39	3.44	0.98	0.74	0.88	0.01
PSD Significant Levels														25	15	40	100	40	40

1986 Project Status

The increase in potential emissions from the 1986 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

1991 Modification

Modification Description: Added 1 Power & Free Pouring/Cooling Conveyor Line

Emission Units - 1991 mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Power & Free Pouring/Cooling Conveyor Line	**43,800.00**		1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	35.04	52.56	None		35.04	52.56	3.07	272.58	0.22	0.44
Increase in PTE from Modification										35.04	52.56			35.04	52.56	3.07	272.58	0.22	0.44
PSD Significant Levels														25	15	40	100	40	40

1991 Project Status

The potential emissions from the Power & Free Pouring/Cooling Conveyor Line exceed the PSD significant levels for PM, PM10, and CO. The Permittee has proposed to include a limit for the Power & Free Pouring/Cooling Conveyor Line of 12,450 ton/yr metal to keep the 1991 project minor for PSD. The table below shows the limited PTE of the project.

Emission Units - 1991 mod (limited)	Limited Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Power & Free Pouring/Cooling Conveyor Line	**12,450.00**		1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	9.96	14.94	None		9.96	14.94	0.87	77.48	0.06	0.12
Increase in PTE from Modification										9.96	14.94			9.96	14.94	0.87	77.48	0.06	0.12
PSD Significant Levels														25	15	40	100	40	40

1991 Project Status After Limits

The Permittee has proposed a throughput limit for the Power & Free Pouring/Cooling Conveyor Line to make PSD not applicable to the 1991 project. The metal throughput to the Power & Free Pouring/Cooling Line shall be limited to 12,450 tons per twelve (12) consecutive month period.

Actual Rate for Power & Free Pouring/Cooling Conveyor Line

Based on actual melt rates supplied by the Permittee, the total throughput to the Power & Free Pouring/Cooling Conveyor Line did not exceed 12,450 tons/yr until 2005. Note: A new throughput limit was established in 2004 based on a modification to the Power & Free line.

1992 Modification

Modification Description: Added 2 Shell Mold Machines at 700 pounds each and 2 shell mold machine ovens

Emission Units - 1992 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
Two (2) Shell Mold Machines @ 700 pounds sand each	**6,132.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	3.37	3.37	None		3.37	3.37	0.94	0.00	0.00	0.00
Two (2) Shell Mold Machine Oven		**2.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.017	0.067	None		0.017	0.067	0.05	0.74	0.88	0.01
PTE from Modification										3.39	3.44			3.39	3.44	0.98	0.74	0.88	0.01
PSD Significant Levels														25	15	40	100	40	40

1992 Project Status

The increase in potential emissions from the 1992 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

1993 Modification

Modification Description: Added 2 Shell Mold Machines at 700 pounds each and 2 shell mold machine ovens

Emission Units - 1993 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
Two (2) Shell Mold Machines @ 700 pounds sand each	**6,132.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	3.37	3.37	None		3.37	3.37	0.94	0.00	0.00	0.00
Two (2) Shell Mold Machine Oven		**2.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.017	0.067	None		0.017	0.067	0.05	0.74	0.88	0.01
PTE from Modification										3.39	3.44			3.39	3.44	0.98	0.74	0.88	0.01
PSD Significant Levels														25	15	40	100	40	40

1993 Project Status

The increase in potential emissions from the 1993 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

1995 Modification

Modification Description: Removed 13 Shell Mold Machines, added 4 Shell Mold Machines at 700 pounds each and 4 shell mold machine ovens

Emission Units - 1995 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~Thirteen (13) Shell Mold Machines~~																			
Four (4) Shell Mold Machines @ 700 pounds sand each	**12,264.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	6.75	6.75	None		6.75	6.75	1.87	0.00	0.00	0.00
Four (4) Shell Mold Machine Oven		**4.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.033	0.133	None		0.033	0.133	0.10	1.47	1.75	0.01
PTE from Modification										6.78	6.88			6.78	6.88	1.97	1.47	1.75	0.01
PSD Significant Levels														25	15	40	100	40	40

1995 Project Status

The increase in potential emissions from the 1995 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

1999 Modification

Modification Description: Removed 3 Shell Core Machines, added 1 Shell Mold Machine at 700 pounds, 1 shell mold machine oven, 2 Shell Core Machines at 300 pounds each, and 2 shell core machine ovens

Emission Units - 1999 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~Three (3) Shell Core Machines~~																			
One (1) Shell Mold Machines @ 700 pounds sand each	**3,066.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	1.69	1.69	None		1.69	1.69	0.47	0.00	0.00	0.00
One (1) Shell Mold Machine Oven		**2.00**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.017	0.067	None		0.017	0.067	0.05	0.74	0.88	0.01
Two (2) Shell Core Machines @ 300 pounds sand each	**2,628.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	1.45	1.45	None		1.45	1.45	0.40	0.00	0.00	0.00
Two (2) Shell Core Machine Oven		**0.44**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.004	0.015	None		0.004	0.015	0.01	0.16	0.19	0.001
PTE from Modification										3.15	3.21			3.15	3.21	0.93	0.90	1.07	0.006
PSD Significant Levels														25	15	40	100	40	40

1999 Project Status

The increase in potential emissions from the 1999 modification is less than the PSD significant levels. No facility-specific limits or PSD BACT analysis would have been necessary.

2000 Modification

Modification Description: Removed 2 2.5 ton EIFs, replaced with 2 new 2.5 ton EIFs (4.95 ton/hr total capacity), which slightly lowers maximum capacity of other units.

Emission Units - 2000 Mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~Two (2) 2.5 ton EIFs~~																			
Two (2) 2.5 ton EIFs (4.95 tph total)	**43,362.00**		0.9	0.86	0	0	0	0	lb/ton metal	19.51	18.65	None		19.51	18.65	0.00	0.00	0.00	0.00
PTE from Modification										19.51	18.65			19.51	18.65	0.00	0.00	0.00	0.00
PSD Significant Levels														25	15	40	100	40	40

2000 Project Status

The potential emissions from the 2000 modification project EIFs exceed the PSD Significant Level for PM10. The Permittee has proposed to include a limit for the two (2) 2.5 ton EIFs of 24,000 ton/yr metal to keep the 2000 project minor for PSD. The table below shows the limited PTE of the project.

Emission Units - 2000 Mod (limited)	Limited Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
~~Two (2) 2.5 ton EIFs~~																			
Two (2) 2.5 ton EIFs (4.95 tph total)	**24,000.00**		0.9	0.86	0	0	0	0	lb/ton metal	10.80	10.32	None		10.80	10.32	0.00	0.00	0.00	0.00
PTE from Modification										10.80	10.32			10.80	10.32	0.00	0.00	0.00	0.00
PSD Significant Levels														25	15	40	100	40	40

2000 Project Status After Limits

The Permittee has proposed a melt rate limit for the EIFs installed in 2000 to render PSD not applicable. The metal throughput to the two (2) EIFs shall be limited to 24,000 tons per twelve (12) consecutive month period.

Actual Melt Rate for EIFs

Based on actual melt rates supplied by the Permittee, the total metal melt rate has never exceeded 24,000 tons per year.

2004 Modification

Modification Description: Modified the Power & Free Pouring/Cooling Conveyor Line to extend the cooling conveyor. The Power & Free Line was initially installed to replace Turn 1, Turn 2, and Turn 3; however, it did not work as expected and could not handle 100% of production needed - this modification was performed to allow for the full replacement of Turn 1, Turn 2, and Turn 3.

Emission Units - 2004 mod	Maximum Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Power & Free Pouring/Cooling Conveyor Line	**43,362.00**		1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	34.69	52.03	None		34.69	52.03	3.04	269.86	0.22	0.43
Increase in PTE from Modification										34.69	52.03			34.69	52.03	3.04	269.86	0.22	0.43
PSD Significant Levels														25	15	40	100	40	40

2004 Project Status

The potential emissions from the Power & Free Pouring/Cooling Conveyor Line exceed the PSD significant levels for PM, PM10, and CO. The Permittee has proposed to include a limit for the Power & Free Pouring/Cooling Conveyor Line of 24,000 ton/yr metal with a project netting analysis done on the removal of Turn 1, 2, and 3 Pouring/Cooling lines to keep the 2004 project minor for PSD.

Project Netting Analysis

Emission Units - 2004 mod (limited)	Limited Capacity (tons/year)	Past Actual (Baseline) (tons/yr)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Power & Free Pouring/Cooling Conveyor Line (Increase Based on 1994 & 1995 actuals for Power & Free Line)	**24,000.00**	6245.21	1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	14.20	21.31	None		14.20	21.31	1.24	110.49	0.09	0.18
Pouring/Cooling Turntables - Turn 1, Turn 2, and Turn 3 (Decrease Based on 1994 & 1995 actuals for Turn 1, Turn 2, Turn 3 combined)		6245.21	1.6	2.4	0.14	12.45	0.01	0.02	lb/ton metal	-5.00	-7.49	None		-5.00	-7.49	-0.44	-38.87	-0.03	-0.06
Net Increase										9.21	13.81			9.21	13.81	0.81	71.63	0.06	0.12
PSD Significant Levels														25	15	40	100	40	40

2004 Project Status After Limits

The Permittee has proposed a throughput limit for the Power & Free Pouring/Cooling Conveyor Line and a netting analysis to render PSD not applicable. The metal throughput to the Power & Free Pouring/Cooling Line shall be limited to 24,000 tons per twelve (12) consecutive month period.

Actual Rate for Power & Free Pouring/Cooling Conveyor Line

Based on actual melt rates supplied by the Permittee, the total throughput to the Power & Free Pouring/Cooling Conveyor Line has never exceeded 24,000 tons/yr and Turn 1, Turn 2, and Turn 3 have not operated after 2004.

2006 Modification

Modification Description: Added Automated Shakeout, four shell core machines at 300 pounds each, and four shell core machine ovens; removed Pouring/Cooling Turntables - Turn 1 & Turn 2, rendered Turn 3 physically inoperable. The automated shakeout unit was added for purposes of worker health and safety and not to increase capacity at the plant.

Emission Units - 2006 Mod	Maximum Capacity (ton/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Automated Shakeout	**43,362.00**		3.20	2.24	1.2	6.22	0	0	lb/ton metal	69.38	48.57	PM/PM10: Fabric Filter	94.05%	4.13	2.89	26.02	134.93	0.00	0.00
~~Three (3) Pouring/Cooling Turntables - Turn 1 , Turn 2, Turn 3~~																			
Four (4) Shell Core Machines @ 300 pounds sand each	**5,256.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	2.89	2.89	None		2.89	2.89	0.80	0.00	0.00	0.00
Four (4) Shell Core Machine Oven		**0.88**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.007	0.029	None		0.007	0.029	0.02	0.32	0.39	0.002
Increase in PTE from Modification										72.28	51.49			7.03	5.81	26.84	135.25	0.39	0.002
PSD Significant Levels														25	15	N/A	100	40	40
Emission Offset Significant Levels														N/A	N/A	40	N/A	N/A	N/A

2006 Project Status

The potential emissions from the 2006 modification project exceeds the PSD Significant Level for CO. The Permittee has proposed to include a limit for the Automated Shakeout System of 24,000 ton/yr metal to keep the 2006 project minor for PSD. The table below shows the limited PTE of the project.

Emission Units - 2006 Mod (limited)	Limited Capacity (tons/year)	Maximum Capacity (MMBtu/ hour)	Emission Factors							Uncontrolled		Control	Control Efficiency	Controlled PTE (ton/yr)					
			PM	PM10	VOC	CO	NOx	SO2	EF Units	PM	PM10			PM	PM10	VOC	CO	NOx	SO2
One (1) Automated Shakeout	**24,000.00**		3.20	2.24	1.2	6.22	0	0	lb/ton metal	38.40	26.88	PM/PM10: Fabric Filter	94.05%	2.28	1.60	14.40	74.68	0.00	0.00
~~Three (3) Pouring/Cooling Turntables - Turn 1 , Turn 2, Turn 3~~																			
Four (4) Shell Core Machines @ 300 pounds sand each	**5,256.00**		1.1	1.1	0.305	0	0	0	lb/ton sand	2.89	2.89	None		2.89	2.89	0.80	0.00	0.00	0.00
Four (4) Shell Core Machine Oven		**0.88**	1.9	7.6	5.5	84	100	0.6	lb/MMCF	0.007	0.029	None		0.007	0.029	0.02	0.32	0.39	0.002
PTE from Modification										41.30	29.80			5.18	4.52	15.22	75.00	0.39	0.00
PSD Significant Levels														25	15	N/A	100	40	40
Emission Offset Significant Levels														N/A	N/A	40	N/A	N/A	N/A

2006 Project Status After Limits

The Permittee has proposed a throughput limit for the 2006 automated shakeout system to render PSD not applicable. The throughput to the automated shakeout system shall be limited to 24,000 tons per twelve (12) consecutive month period. In addition, the permittee shall operate the fabric filter at all times that the automated shakeout is in operation in order to render PSD not applicable.

Actual Rate for Automated Shakeout System

Based on actual melt rates supplied by the Permittee, the total metal melt rate has never exceeded 24,000 tons per year.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Earl Miller
Kingsbury Castings Division
PO Box 639
LaPorte, IN 46352

DATE: July 8, 2009

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

SUBJECT: Final Decision
Title V
091 - 25086 - 00078

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
John Hiler, President
Nisha Sizemore August Mack Environmental, Inc.
OAQ Permits Branch Interested Parties List

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

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

Mitchell E. Daniels Jr.
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Commissioner

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July 8, 2009

TO: LaPorte Co Public Library LaPorte Branch

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

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

Applicant Name: **Kingsbury Castings Division**
Permit Number: **091 - 25086 - 00078**

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	LPOGOST 7/8/2009 Kingsbury Castings Division 091 - 25086 - 00078 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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5		LaPorte County Commissioners 555 Michigan Avenue # 202 LaPorte IN 46350 *(Local Official)*									
6		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
7		Mr. Charles Staehler August Mack Environmental, Inc. 1200 N. Meridian Street Ste #400 Indianapolis IN 46204 *(Consultant)*									
8		Kingsbury Town Council P.O. Box 62 Kingsbury IN 46345 *(Local Official)*									
9		LaPorte County Health Department County Complex, 4th Floor, 809 State St. LaPorte IN 46350-3329 *(Health Department)*									
10		Mr. Dick Paulen Barnes & Thornburg 121 W Franklin Street Elkhart IN 46216 *(Affected Party)*									
11		Ms. Mindy Heidel 9223 Broadway Suite A Merrillville IN 46410 *(Affected Party)*									
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