



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: October 23, 2012

RE: Howmet Castings and Services, Inc. / 091 - 31556 - 00047

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Sean Chapple
Howmet Castings and Services, Inc.
1110 East Lincolnway
LaPorte, IN 46350

October 23, 2012

Re: FESOP with NSR
F091-31556-00047

Dear Mr. Chapple

Howmet Castings and Services, Inc. was issued a Minor Source Operating Permit (MSOP) Renewal No. M091-21153-00047 on September 1, 2006 for a stationary metal alloy casting plant located at 1110 East Lincolnway, LaPorte, Indiana. On February 28, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to construct and operate new emission units. In addition, Howmet Castings and Services, Inc. have determined their potential emissions exceed the MSOP thresholds. Therefore, Howmet Castings and Services, Inc. has requested to transition from a MSOP to a FESOP. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a FESOP with New Source Review is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Howmet Castings and Services, Inc.
LaPorte, Indiana
Permit Reviewer: Brian Williams

Page 2 of 2
FESOP No. 091-31556-00047

Attached please find the entire permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.
If you have any questions on this matter, please contact Brian Williams, of my staff, at 317-234-5375 or 1-800-451-6027, and ask for extension 4-5375.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and Permit

IC/BMW

cc: File - LaPorte County
LaPorte County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section



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New Source Review and Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

**Howmet Castings and Services, Inc.
1110 East Lincolnway
LaPorte, Indiana 46350**

(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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

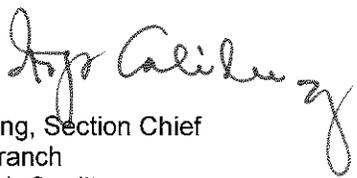
Operation Permit No.: F091-31556-00047	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: October 23, 2012 Expiration Date: October 23, 2017

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Attachment B: NESHAP Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines

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 2-8-3(b)]

The Permittee owns and operates a stationary metal alloy casting plant.

Source Address:	1110 East Lincolnway, LaPorte, Indiana 46350
General Source Phone Number:	(219) 326-7400
SIC Code:	3369 (Nonferrous Foundries, Except Aluminum and Copper)
County Location:	LaPorte
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) One (1) Wax Pattern Assembly Operation, constructed before 2000, consisting of hand application and dip coating of multiple VOC and HAP containing solvents to wax patterns, uncontrolled, and exhausting to the indoors.
- (b) One (1) Ceramic Mold Operation, with a nominal capacity of 0.66 tons of metal and ceramic molds per hour, consisting of the following:
 - (1) One (1) monoshell latex surface coating booth, identified as Monoshell, constructed in 2001, with a nominal capacity of 15 wax forms per hour, equipped with dry filters to control particulate, exhausting to stack MS1;
 - (2) One (1) dip manufacturing operation, constructed in 2002, with a nominal capacity of 30 bags of Zircon flour per hour (0.75 tons per hour), with particulate controlled by a baghouse rated at 1,500 cfm, exhausting to stack DMBH-1;
 - (3) Twenty-two (22) sanding towers, identified as STUCCO-TWR-7 through STUCCO-TWR-22, STUCCO-TWR-24 through STUCCO-TWR-26, and STUCCO-TWR-28 through STUCCO-TWR-30, constructed in 1991, with a combined nominal capacity of 0.66 tons per hour of sand, with particulate controlled by a baghouse with High Efficiency Particulate Air (HEPA) filters, identified as DUST-COLL-MONO-FARR, and exhausting back into the Monoshell Department;
 - (4) One (1) aluminum oxide barrel sander, constructed in 2004, with a nominal capacity of 0.6 tons per year of aluminum oxide, with particulate emissions exhausting back into the Monoshell Department; and
 - (5) One (1) dewax furnace, identified as DEWAX-BIG-BERTHA, constructed in 1991, with a nominal capacity of 0.32 tons per hour of cores, and a nominal rated

heat capacity of 5.75MMBtu/hr, equipped with one (1) natural gas-fired afterburner, identified as DEWAX-BIG-BERTHA AFTERBURNER, with a nominal rated heat capacity of 1.2 MMBtu/hr as a control, exhausting to stack DW1A.

- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.6 tons per hour of metal, consisting of:
 - (1) One (1) Electric Induction Oven, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (2) One (1) Electric Induction Oven, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - (3) One (1) Electric Induction Oven, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (4) One (1) Electric Induction Oven, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - (5) One (1) Electric Induction Oven, identified as VACUUM-CAST-09, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (6) One (1) Electric Induction Oven, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.

Under 40 CFR 63, Subpart ZZZZZZ, the six (6) electric induction ovens are considered affected sources.

 - (7) One (1) mold hot topping process, constructed before 2000, with a nominal ferrux usage rate of 250,000 pounds per year, uncontrolled, and exhausting to the indoors.
- (d) Pneumatic Shell Removal, identified as KNOCKOUT-01 and KNOCKOUT-02, constructed in 1988, with a nominal capacity of 0.59 tons per hour each of casting shells, with particulate controlled by a common dust collector, identified as KNOCKOUT DUST COLLECTOR, and exhausting to stack KOBH-1.
- (e) Acid etching process, constructed before 2000, equipped with a scrubber and demister for particulate control of HCl, exhausting to stack Scrubber 02.
- (f) Post-Cast Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by a baghouse, identified as Post-Cast, constructed in 2005, exhausting to stack ZK4, and consisting of the following:
 - (1) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders; and
 - (2) Enclosed aluminum oxide blasting cabinets.

- (g) Finishing Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by one (1) baghouse, identified as Carter Day, which was constructed before 2000, and exhausting to stacks ZK1 and ZK2 and one (1) baghouse, identified as West Metals, which was constructed in 2008, and exhausting to stack ZK5. The finishing operations consist of the following:
- (1) Enclosed aluminum oxide blasting cabinets;
 - (2) Enclosed aluminum oxide blasting booths utilizing hand held blasting pens;
 - (3) Hand held grinding performed in booths; and
 - (4) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders.
- (h) One (1) natural gas-fired boiler, identified as Superior Boiler #3, constructed in 1957, with a nominal rated heat input of 13.4 MMBtu/hr, exhausting to stack B2.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
- (1) One (1) natural gas-fired hot water heater, constructed in 1989, with a nominal rated heat input of 0.65 MMBtu/hr, exhausting to stack HW01. This is a trivial emission unit;
 - (2) One (1) natural gas-fired boiler, identified as BOILER-EAST, constructed in 1991, with nominal rated heat input of 4.2 MMBtu/hr, exhausting to stacks B3.
 - (3) One (1) natural gas-fired boiler, identified as BOILER-HUMIDITY, constructed in 1991, with nominal rated heat input of 2.3 MMBtu/hr, exhausting to stacks B1.
 - (4) One (1) natural gas-fired boiler, identified as BOILER-DEGREASE, constructed in 1994, with nominal rated heat input of 1.4 MMBtu/hr, exhausting to stacks O4H.
 - (5) Miscellaneous natural gas-fired space heaters totaling a nominal of 0.10 MMBtu/hr heat input. These are trivial emission units.
 - (6) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-02, constructed in 1987, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 2P.
 - (7) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-02, constructed in 1994, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 2P1.
 - (8) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-04, constructed in 1988, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 4P.
 - (9) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-05,

constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 5P.

- (10) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-06, constructed in 1990, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 6P.
 - (11) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-06, constructed in 1991, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 6P1.
 - (12) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-09, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 9P.
 - (13) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-10, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 10P.
 - (14) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-10, constructed in 1988, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 10P1.
- (b) Two (2) standby diesel generators, identified as GEN-AUXPWR-01 & GEN-AUXPWR-02, with nominal capacities of 315 hp and 375 hp, respectively. Each generator was manufactured before April 1, 2006 and constructed before June 12, 2006.

These units are considered affected sources under 40 CFR Part 63, Subpart ZZZZ.

- (c) Three (3) potassium hydroxide storage tanks, constructed in 2007, identified as Electric Low Temp 01, Electric Low Temp 02 and Electric Low Temp 03, equipped with a wet scrubber to control particulate in an air stream with a volumetric flow rate of 2,800 acfm and an inlet grain loading of 0.01 gr/acf of particulate, exhausting to stacks T1 and T2, respectively.
- (d) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.
- (e) Pressure washing operations, constructed in 1991 and modified in 2009 and 2010, using hydraulic water to remove residual amounts of shell from cast metal pieces in enclosed booths, exhausting outside of the building.
- (f) Miscellaneous belt grinders, band and wet saws, and drills with particulate matter emissions below 5 pounds per hour.
- (g) Nine (9) tungsten inert gas (TIG) welding stations, constructed before 2000, with a combined nominal capacity of 0.075 pounds of electrode and wire per hour, equipped with dust collectors, and exhausting to the indoors.
- (h) Noncontact cooling tower systems with either of the following:
 - (1) Natural draft cooling towers not regulated under a NESHAP.
 - (2) Forced and induced draft cooling tower systems not regulated under a NESHAP.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

-
- (a) This permit, F091-31556-00047, 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, 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 2-8-6] [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 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
- (1) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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
- (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 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

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

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.12 Emergency Provisions [326 IAC 2-8-12]

- (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 except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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, or 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 Office of Air Quality, 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 2-8-4(3)(C)(ii) and must contain the following:

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

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 2-8-3(c)(6) 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 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) 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.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

- (a) All terms and conditions of permits established prior to F091-31556-00047 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.

- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 2-8-8(a)]
- (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 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 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 2-8-15(b)(1) and (c). 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 2-8-15(b)(1) and (c).

- (b) Emission Trades [326 IAC 2-8-15(b)]
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 2-8-15(b).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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) 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.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
 - (4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

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

C.4 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.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

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

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

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. Pursuant to 326 IAC 1-7-5(a), all source having less than twenty-five (25) tons per year of actual emissions (after controls) shall be exempt from the requirements specified in 326 IAC 1-7-3(a).

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.10 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.13 Risk Management Plan [326 IAC 2-8-4] [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 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.

- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.16 Emission Statement [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The statement must be submitted to:

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

The emission statement does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

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

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

- (b) The address for report submittal is:

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

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

- (d) 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.

Stratospheric Ozone Protection

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) Wax Pattern Assembly Operation, constructed before 2000, consisting of hand application and dip coating of multiple VOC and HAP containing solvents to wax patterns, uncontrolled, and exhausting to the indoors.
- (b) One (1) Ceramic Mold Operation, with a nominal capacity of 0.66 tons of metal and ceramic molds per hour, consisting of the following:
 - (1) One (1) monoshell latex surface coating booth, identified as Monoshell, constructed in 2001, with a nominal capacity of 15 wax forms per hour, equipped with dry filters to control particulate, exhausting to stack MS1;
 - (2) One (1) dip manufacturing operation, constructed in 2002, with a nominal capacity of 30 bags of Zircon flour per hour (0.75 tons per hour), with particulate controlled by a baghouse rated at 1,500 cfm, exhausting to stack DMBH-1;
 - (3) Twenty-two (22) sanding towers, identified as STUCCO-TWR-7 through STUCCO-TWR-22, STUCCO-TWR-24 through STUCCO-TWR-26, and STUCCO-TWR-28 through STUCCO-TWR-30, constructed in 1991, with a combined nominal capacity of 0.66 tons per hour of sand, with particulate controlled by a baghouse with High Efficiency Particulate Air (HEPA) filters, identified as DUST-COLL-MONO-FARR, and exhausting back into the Monoshell Department;
 - (4) One (1) aluminum oxide barrel sander, constructed in 2004, with a nominal capacity of 0.6 tons per year of aluminum oxide, with particulate emissions exhausting back into the Monoshell Department; and
 - (5) One (1) dewax furnace, identified as DEWAX-BIG-BERTHA, constructed in 1991, with a nominal capacity of 0.32 tons per hour of cores, and a nominal rated heat capacity of 5.75MMBtu/hr, equipped with one (1) natural gas-fired afterburner, identified as DEWAX-BIG-BERTHA AFTERBURNER, with a nominal rated heat capacity of 1.2 MMBtu/hr as a control, exhausting to stack DW1A.
- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.6 tons per hour of metal, consisting of:
 - (1) One (1) Electric Induction Oven, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (2) One (1) Electric Induction Oven, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - (3) One (1) Electric Induction Oven, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (4) One (1) Electric Induction Oven, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - (5) One (1) Electric Induction Oven, identified as VACUUM-CAST-09, constructed before 2000, uncontrolled, and exhausting to the indoors.

- (6) One (1) Electric Induction Oven, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.
- Under 40 CFR 63, Subpart ZZZZZZ, the six (6) electric induction ovens are considered affected sources.
- (7) One (1) mold hot topping process, constructed before 2000, with a nominal ferrux usage rate of 250,000 pounds per year, uncontrolled, and exhausting to the indoors.

(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 2-8-4(1)]

D.1.1 Particulate Matter (PM) [326 IAC 2-2]

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

- (a) The combined PM emissions from the sanding towers through the baghouse identified as DUST-COLL-MONO-FARR shall not exceed 3.10 pounds per hour.

Compliance with this limit, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

- (a) The combined PM10 emissions from the sanding towers through the baghouse identified as DUST-COLL-MONO-FARR shall not exceed 2.57 pounds per hour.
- (b) The combined PM2.5 emissions from the sanding towers through the baghouse identified as DUST-COLL-MONO-FARR shall not exceed 2.57 pounds per hour.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Dip Manufacturing Operation	0.75	3.38
Sanding Towers	0.66 (total)	3.10 (total)
Electric Induction Ovens	0.59 (total)	2.88 (total)

The above pounds per hour limitations were calculated with the following equation:

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

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

D.1.4 Incinerators [326 IAC 4-2-2]

Pursuant to 326 IAC 4-2 (Incinerators), the dewax furnace, identified as DEWAX-BIG-BERTHA shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 and 326 IAC 2;
- (d) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
- (e) Not emit particulate matter in excess of one (1) of the following:
 - (1) Three-tenths (0.3) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions correct to fifty percent (50%) excess air for incinerators with solid waste capacity of greater than or equal to two hundred (200) pounds per hour.
 - (2) Five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity of less than two hundred (200) pounds per hour.
- (f) If any of the requirements of (a) through (e) above are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

The Permittee operating the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

D.1.5 Carbon Monoxide Emission Limits [326 IAC 9-1-2]

Pursuant to 326 IAC 9-1-2 (Carbon Monoxide Emission Limits), the Permittee shall not operate the dewax furnace, identified as DEWAX-BIG-BERTHA, unless the waste gas stream is burned in one of the following:

- (a) Direct-flame afterburner; or
- (b) Secondary chamber.

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.7 Particulate Control

- (a) In order to comply with Conditions D.1.1, D.1.2, and D.1.3 the baghouses for particulate control shall be in operation and control emissions from the dip manufacturing operation and sanding towers at all times when these processes are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1, D.1.2, and D.1.3, the Permittee shall perform PM, PM10, and PM2.5 testing of the sanding towers baghouse not later than one hundred and eighty (180) days after the issuance of this permit (091-31556-00047). This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.9 Parametric Monitoring

The Permittee shall record the pressure drop across the sanding tower baghouse used in conjunction with the sanding tower operations, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response. The normal range is a pressure drop between 1.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.10 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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 failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks or dust traces.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.11 Record Keeping Requirements

- (a) To document compliance with Condition D.1.9, the Permittee shall maintain once per day records of the pressure drop. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (d) Pneumatic Shell Removal, identified as KNOCKOUT-01 and KNOCKOUT-02, constructed in 1988, with a nominal capacity of 0.59 tons per hour each of casting shells, with particulate controlled by a common dust collector, identified as KNOCKOUT DUST COLLECTOR, and exhausting to stack KOBH-1.
- (e) Acid etching process, constructed before 2000, equipped with a scrubber and demister for particulate control of HCl, exhausting to stack Scrubber 02.
- (f) Post-Cast Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by a baghouse, identified as Post-Cast, constructed in 2005, exhausting to stack ZK4, and consisting of the following:
 - (1) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders; and
 - (2) Enclosed aluminum oxide blasting cabinets.
- (g) Finishing Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by one (1) baghouse, identified as Carter Day, which was constructed before 2000, and exhausting to stacks ZK1 and ZK2 and one (1) baghouse, identified as West Metals, which was constructed in 2008, and exhausting to stack ZK5. The finishing operations consists of the following:
 - (1) Enclosed aluminum oxide blasting cabinets;
 - (2) Enclosed aluminum oxide blasting booths utilizing hand held blasting pens;
 - (3) Hand held grinding performed in booths; and
 - (4) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders.

(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 2-8-4(1)]

D.2.1 Particulate Matter (PM) [326 IAC 2-2]

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

- (a) The PM emissions from the following units shall not exceed the emission limits listed in the table below:

Unit Description	Baghouse ID	PM Emission Limit (lbs/hr)
Pneumatic Shell Removal (KNOCKOUT-01 and KNOCKOUT-02)	KNOCKOUT DUST COLLECTOR	5.76
Post-Cast Operations	Post-Cast	2.88
Finishing Operations	Carter Day	2.88
Finishing Operations	West Metals	2.88

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.2.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

- (a) The PM10 and PM2.5 emissions from the following units shall not exceed the emission limits listed in the tables below:

Unit Description	Baghouse ID	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
Pneumatic Shell Removal (KNOCKOUT-01 and KNOCKOUT-02)	KNOCKOUT DUST COLLECTOR	2.44	2.44
Post-Cast Operations	Post-Cast	2.88	2.88
Finishing Operations	Carter Day	2.88	2.88
Finishing Operations	West Metals	2.88	2.88

- (b) The Nickel, Chromium, Cobalt, and Total HAPs emissions from the following units shall be limited to less than the emission limits listed in the table below:

Unit Description	Baghouse ID	Nickel Emission Limit (lbs/hr)	Chromium Emission Limit (lbs/hr)	Cobalt Emission Limit (lbs/hr)	Total HAPs Emission Limit (lbs/hr)
Post-Cast Operations	Post-Cast	1.74	0.42	0.17	2.32
Finishing Operations	Carter Day				
Finishing Operations	West Metals				

Compliance with these limits, combined with the potential to emit PM10, PM2.5, total HAPs, and any single HAP from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, any single HAP to less than ten (10) tons per 12 consecutive month period, total HAPs to less than twenty-five (25) tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

D.2.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Pneumatic Shell Removal (KNOCKOUT-01)	0.59	2.88
Pneumatic Shell Removal (KNOCKOUT-02)	0.59	2.88
Post-Cast Operations/ Post-Cast	0.59	2.88
Finishing Operations/Carter Day	0.59	2.88
Finishing Operations/West Metals	0.59	2.88

The above pounds per hour limitations were calculated with the following equation:

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

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

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.2.5 Particulate Control

- (a) In order to comply with Conditions D.2.1, D.2.2, and D.2.3, the baghouses for particulate control shall be in operation and control emissions from the pneumatic shell removal, post-cast, and finishing operations at all times that the pneumatic shell removal, post-cast, and finishing processes are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, the Permittee shall perform PM, PM10, and PM2.5 testing of the pneumatic shell removal dust collector not later than one hundred and eighty (180) days after the issuance of this permit (091-31556-00047). This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

- (b) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, the Permittee shall perform PM, PM10, and PM2.5 testing of the post-cast, carter day, and west metals baghouses not later than one hundred and eighty (180) days after the issuance of this permit (091-31556-00047). This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

- (c) In order to demonstrate compliance with Condition D.2.2, the Permittee shall perform nickel, chromium, and cobalt testing of the post-cast, carter day, and west metals baghouses not later than one hundred and eighty (180) days after the issuance of this permit (091-31556-00047). This testing shall be conducted utilizing methods approved by the Commissioner and shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.2.7 Parametric Monitoring

The Permittee shall record the pressure drop across the pneumatic shell removal, post-cast, carter day, and west metals baghouses used in conjunction with the pneumatic shell removal, post-cast, and finishing operations, at least once per day when any of the processes are in operation. When for any one reading, the pressure drop across each baghouse is outside the normal range, the Permittee shall take reasonable response. The normal range for each unit is a pressure drop between 0.2 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.8 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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 failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks or dust traces.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.7, the Permittee shall maintain once per day records of the pressure drop. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(h) One (1) natural gas-fired boiler, identified as Superior Boiler #3, constructed in 1957, with a nominal rated heat input of 13.4 MMBtu/hr, exhausting to stack B2.

Insignificant Activities consisting of:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
- (1) One (1) natural gas-fired hot water heater, constructed in 1989, with a nominal rated heat input of 0.65 MMBtu/hr, exhausting to stack HW01; This is a trivial emission unit;
 - (2) One (1) natural gas-fired boiler, identified as BOILER-EAST, constructed in 1991, with nominal rated heat input of 4.2 MMBtu/hr, exhausting to stacks B3.
 - (3) One (1) natural gas-fired boiler, identified as BOILER-HUMIDITY, constructed in 1991, with nominal rated heat input of 2.3 MMBtu/hr, exhausting to stacks B1.
 - (4) One (1) natural gas-fired boiler, identified as BOILER-DEGREASE, constructed in 1994, with nominal rated heat input of 1.4 MMBtu/hr, exhausting to stacks O4H.

(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 2-8-4(1)]

D.3.1 Particulate [326 IAC 6-2-3] [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-3(d) (Particulate Limitations for Sources of Indirect Heating), particulate emissions from Superior Boiler #3 shall in no case exceed 0.8 pounds per MMBtu heat input.
- (b) Pursuant to 326 IAC 6-2-4 (Particulate Limitations for Sources of Indirect Heating) the particulate emissions from the hot water heater shall be limited to 0.497 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
 Q = total source operating capacity (20.55 MMBtu/hr)

- (c) Pursuant to 326 IAC 6-2-4 (Particulate Limitations for Sources of Indirect Heating) the particulate emissions from BOILER-HUMIDITY and BOILER-EAST shall each be limited to 0.462 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source operating capacity (27.05 MMBtu/hr)

- (d) Pursuant to 326 IAC 6-2-4 (Particulate Limitations for Sources of Indirect Heating) the particulate emissions from BOILER-DEGREASE shall be limited to 0.456 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source operating capacity (28.45 MMBtu/hr)

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.59 tons per hour of metal, consisting of:
- (1) One (1) Electric Induction Oven, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (2) One (1) Electric Induction Oven, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - (3) One (1) Electric Induction Oven, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (4) One (1) Electric Induction Oven, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - (5) One (1) Electric Induction Oven, identified as VACUUM-CAST-09, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (6) One (1) Electric Induction Oven, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.

Under 40 CFR 63, Subpart ZZZZZZ, the six (6) electric induction ovens are considered affected sources.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 20] [40 CFR 63]

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries [326 IAC 20-1] [40 CFR Part 63]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions as applicable, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR 63, Subpart ZZZZZZ.

E.1.2 National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries] [40 CFR Part 63, Subpart ZZZZZZ]

The Permittee, which owns and operates an other nonferrous foundry that is an area source of hazardous air pollutant (HAP) emissions shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZZ (included as Attachment A of this permit):

- | | | | |
|-----|---------------------------------------|-----|-----------------|
| (a) | 40 CFR 63.11544(a), (b), (c), and (f) | (h) | 40 CFR 63.11557 |
| (b) | 40 CFR 63.11545(a) | (i) | Table 1 |
| (c) | 40 CFR 63.11550(a), (c), and (d) | | |
| (d) | 40 CFR 63.11552(a) | | |
| (e) | 40 CFR 63.11553 | | |
| (f) | 40 CFR 63.11555 | | |
| (g) | 40 CFR 63.11556 | | |

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities consisting of:

- (b) Two (2) standby diesel generators, identified as GEN-AUXPWR-01 & GEN-AUXPWR-02, with nominal capacities of 315 hp and 375 hp, respectively. Each generator was manufactured before April 1, 2006 and constructed before June 12, 2006.

These units are considered affected sources under 40 CFR Part 63, Subpart ZZZZ.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 20] [40 CFR 63]

- E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1] [40 CFR Part 63]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

- E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-82] [40 CFR Part 63, Subpart ZZZZ]

The two (2) diesel fired generators are subject to the requirements of the 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engine (RICE), which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ (included as Attachment B of this permit):

- (a) 40 CFR 63.6580
- (b) 40 CFR 63.6585
- (c) 40 CFR 63.6590(a)(1)(iii)
- (d) 40 CFR 63.6640(f)
- (e) 40 CFR 63.6670
- (f) 40 CFR 63.6675

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Howmet Castings and Services, Inc.
Source Address: 1110 East Lincolnway, LaPorte, Indiana 46350
FESOP Permit No.: F091-31556-00047

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:

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**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Howmet Castings and Services, Inc.
Source Address: 1110 East Lincolnway, LaPorte, Indiana 46350
FESOP Permit No.: F091-31556-00047

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• 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 Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Howmet Castings and Services, Inc.
 Source Address: 1110 East Lincolnway, LaPorte, Indiana 46350
 FESOP Permit No.: F091-31556-00047

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

Attachment A

Title 40: Protection of Environment

Subpart ZZZZZZ—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries

Source: 74 FR 30393, June 25, 2009, unless otherwise noted.

Applicability and Compliance Dates

§ 63.11544 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an aluminum foundry, copper foundry, or other nonferrous foundry as defined in §63.11556, "What definitions apply to this subpart?" that is an area source of hazardous air pollutant (HAP) emissions as defined in §63.2 and meets the criteria specified in paragraphs (a)(1) through (4) of this section. Once you are subject to this subpart, you must remain subject to this subpart even if you subsequently do not meet the criteria in paragraphs (a)(1) through (4) of this section.

(1) Your aluminum foundry uses material containing aluminum foundry HAP, as defined in §63.11556, "What definitions apply to this subpart?"; or

(2) Your copper foundry uses material containing copper foundry HAP, as defined in §63.11556, "What definitions apply to this subpart?"; or

(3) Your other nonferrous foundry uses material containing other nonferrous foundry HAP, as defined in §63.11556, "What definitions apply to this subpart?".

(4) Your aluminum foundry, copper foundry, or other nonferrous foundry has an annual metal melt production (for existing affected sources) or an annual metal melt capacity (for new affected sources) of at least 600 tons per year (tpy) of aluminum, copper, and other nonferrous metals, including all associated alloys. You must determine the annual metal melt production and capacity for the time period as described in paragraphs (a)(4)(i) through (iv) of this section. The quantity of ferrous metals melted in iron or steel melting operations and the quantity of nonferrous metal melted in non-foundry melting operations are not included in determining the annual metal melt production for existing affected sources or the annual metal melt capacity for new affected sources.

(i) If you own or operate a melting operation at an aluminum, copper or other nonferrous foundry as of February 9, 2009, you must determine if you are subject to this rule based on your facility's annual metal melt production for calendar year 2010.

(ii) If you construct or reconstruct a melting operation at an aluminum, copper or other nonferrous foundry after February 9, 2009, you must determine if you are subject to this rule based on your facility's annual metal melt capacity at startup.

(iii) If your foundry with an existing melting operation increases production after calendar year 2010 such that the annual metal melt production equals or exceeds 600 tpy, you must submit a written notification of applicability to the Administrator within 30 days after the end of the calendar year and comply within 2 years after the date of the notification.

(iv) If your foundry with a new melting operation increases capacity after startup such that the annual metal melt capacity equals or exceeds 600 tpy, you must submit a written notification of applicability to the Administrator within 30 days after the capacity increase year and comply at the time of the capacity increase.

(b) This subpart applies to each new or existing affected source located at an aluminum, copper or other nonferrous foundry that is an area source as defined by §63.2. The affected source is the collection of all melting operations located at an aluminum, copper, or other nonferrous foundry.

(c) An affected source is an existing source if you commenced construction or reconstruction of the affected source on or before February 9, 2009.

(d) An affected source is a new source if you commenced construction or reconstruction of the affected source after February 9, 2009.

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

(f) 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 to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

[74 FR 30393, June 25, 2009, as amended at 74 FR 46495, Sept. 10, 2009]

§ 63.11545 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 no later than June 27, 2011.

(b) If you start up a new affected source on or before June 25, 2009, you must achieve compliance with the provisions of this subpart no later than June 25, 2009.

(c) If you start up a new affected source after June 25, 2009, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

Standards and Compliance Requirements

§ 63.11550 What are my standards and management practices?

(a) If you own or operate new or existing affected sources at an aluminum foundry, copper foundry, or other nonferrous foundry that is subject to this subpart, you must comply with the requirements in paragraphs (a)(1) through (3) of this section.

(1) Cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operation to the extent practicable (e.g., except when access is needed; including, but not limited to charging, alloy addition, and tapping).

(2) Purchase only metal scrap that has been depleted (to the extent practicable) of aluminum foundry HAP, copper foundry HAP, or other nonferrous foundry HAP (as applicable) in the materials charged to the melting furnace, except metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting. This requirement does not apply to material that is not scrap (e.g., ingots, alloys, sows) or to materials that are not purchased (e.g., internal scrap, customer returns).

(3) Prepare and operate pursuant to a written management practices plan. The management practices plan must include the required management practices in paragraphs (a)(1) and (2) of this section and may include any other management practices that are implemented at the facility to minimize emissions from melting furnaces. You must inform your appropriate employees of the management practices that they must follow. You may use your standard operating procedures as the management practices plan provided the standard operating procedures include the required management practices in paragraphs (a)(1) and (2) of this section.

(b) If you own or operate a new or existing affected source that is located at a large foundry as defined in §63.11556, you must comply with the additional requirements in paragraphs (b)(1) and (2) of this section.

(1) For existing affected sources located at a large foundry, you must achieve a particulate matter (PM) control efficiency of at least 95.0 percent or emit no more than an outlet PM concentration limit of 0.034 grams per dry standard cubic meter (g/dscm) (0.015 grains per dry standard cubic feet (gr/dscf)).

(2) For new affected sources located at a large foundry, you must achieve a PM control efficiency of at least 99.0 percent or emit no more than an outlet PM concentration limit of at most 0.023 g/dscm (0.010 gr/dscf).

(c) If you own or operate an affected source at a small foundry that subsequently becomes a large foundry after the applicable compliance date, you must meet the requirements in paragraphs (c)(1) through (3) of this section.

(1) You must notify the Administrator within 30 days after the capacity increase or the production increase, whichever is appropriate;

(2) You must modify any applicable permit limits within 30 days after the capacity increase or the production increase to reflect the current production or capacity, if not done so prior to the increase;

(3) You must comply with the PM control requirements in paragraph (b) of this section no later than 2 years from the date of issuance of the permit for the capacity increase or production increase, or in the case of no permit issuance, the date of the increase in capacity or production, whichever occurs first.

(d) These standards apply at all times.

§ 63.11551 What are my initial compliance requirements?

(a) Except as specified in paragraph (b) of this section, you must conduct a performance test for existing and new sources at a large copper or other nonferrous foundry that is subject to §63.11550(b). You must conduct the test within 180 days of your compliance date and report the results in your Notification of Compliance Status according to §63.9(h).

(b) If you own or operate an existing affected source at a large copper or other nonferrous foundry that is subject to §63.11550(b), you are not required to conduct a performance test if a prior performance test was conducted within the past 5 years of the compliance date using the same methods specified in paragraph (c) of this section and you meet either of the following two conditions:

(1) No process changes have been made since the test; or

(2) You demonstrate to the satisfaction of the permitting authority that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(c) You must conduct each performance test according to the requirements in §63.7 and the requirements in paragraphs (c)(1) and (2) of this section.

(1) You must determine the concentration of PM (for the concentration standard) or the mass rate of PM in pounds per hour at the inlet and outlet of the control device (for the percent reduction standard) according to the following test methods:

(i) Method 1 or 1A (40 CFR part 60, appendix A–1) to select sampling port locations and the number of traverse points in each stack or duct. If you are complying with the concentration provision in §63.11550(b), sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere. If you are complying with the percent reduction provision in §63.11550(b), sampling sites must be located at the inlet and outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F (40 CFR part 60, appendix A–1), or Method 2G (40 CFR part 60, appendix A–2) to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B (40 CFR part 60, appendix A–2) to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses” (incorporated by reference—see §63.14) as an alternative to EPA Method 3B.

(iv) Method 4 (40 CFR part 60, appendix A–3) to determine the moisture content of the stack gas.

(v) Method 5 or 5D (40 CFR part 60, appendix A–3) or Method 17 (40 CFR part 60, appendix A–6) to determine the concentration of PM or mass rate of PM (front half filterable catch only). If you choose to comply with the percent reduction PM standard, you must determine the mass rate of PM at the inlet and outlet in pounds per hour and calculate the percent reduction in PM.

(2) Three valid test runs are needed to comprise a performance test. Each run must cover at least one production cycle (charging, melting, and tapping).

(3) For a source with a single control device exhausted through multiple stacks, you must ensure that three runs are performed by a representative sampling of the stacks satisfactory to the Administrator or his or her delegated representative. You must provide data or an adequate explanation why the stack(s) chosen for testing are representative.

§ 63.11552 What are my monitoring requirements?

(a) You must record the information specified in §63.11553(c)(2) to document conformance with the management practices plan required in §63.11550(a).

(b) Except as specified in paragraph (b)(3) of this section, if you own or operate an existing affected source at a large foundry, you must conduct visible emissions monitoring according to the requirements in paragraphs (b)(1) and (2) of this section.

(1) You must conduct visual monitoring of the fabric filter discharge point(s) (outlets) for any VE according to the schedule specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) You must perform a visual determination of emissions once per day, on each day the process is in operation, during melting operations.

(ii) If no VE are detected in consecutive daily visual monitoring performed in accordance with paragraph (b)(1)(i) of this section for 30 consecutive days or more of operation of the process, you may decrease the frequency of visual monitoring to once per calendar week of time the process is in operation, during melting operations. If VE are detected during these inspections, you must resume daily visual monitoring of that operation during each day that the process is in operation, in accordance with paragraph (b)(1)(i) of this section until you satisfy the criteria of this section to resume conducting weekly visual monitoring.

(2) If the visual monitoring reveals the presence of any VE, you must initiate procedures to determine the cause of the emissions within 1 hour of the initial observation and alleviate the cause of the emissions within 3 hours of initial observation by taking whatever corrective action(s) are necessary. You may take more than 3 hours to alleviate a specific condition that causes VE if you identify in the monitoring plan this specific condition as one that could lead to VE in advance, you adequately explain why it is not feasible to alleviate this condition within 3 hours of the time the VE occurs, and you demonstrate that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) As an alternative to the monitoring requirements for an existing affected source in paragraphs (b)(1) and (2) of this section, you may install, operate, and maintain a bag leak detection system for each fabric filter according to the requirements in paragraph (c) of this section.

(c) If you own or operate a new affected source located at a large foundry subject to the PM requirements in §63.11550(b)(2) that is equipped with a fabric filter, you must install, operate, and maintain a bag leak detection system for each fabric filter according to paragraphs (c)(1) through (4) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (c)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram 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 PM loadings. You must continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (c)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, you must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, you must not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority, except as provided in paragraph (c)(1)(vi) of this section.

(vi) Once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (c)(2) of this section.

(vii) You must install the bag leak detection sensor downstream of the fabric filter.

(viii) 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. You must operate and maintain each bag leak detection system according to the plan at all times. Each monitoring plan must describe the items in paragraphs (c)(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 and alarm delay time will be established;

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

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

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

(vi) Corrective action procedures as specified in paragraph (c)(3) of this section.

(3) Except as provided in paragraph (c)(4) of this section, you must initiate procedures to determine the cause of every alarm from a bag leak detection system within 1 hour of the alarm and alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to, the following:

- (i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM 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 fabric filter compartment;
 - (v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or
- (4) You may take more than 3 hours to alleviate a specific condition that causes an alarm if you identify in the monitoring plan this specific condition as one that could lead to an alarm, adequately explain why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrate that the requested time will ensure alleviation of this condition as expeditiously as practicable.
- (d) If you use a control device other than a fabric filter for new or existing affected sources subject to §63.11550(b), you must submit a request to use an alternative monitoring procedure as required in §63.8(f)(4).

§ 63.11553 What are my notification, reporting, and recordkeeping requirements?

- (a) You must submit the Initial Notification required by §63.9(b)(2) no later than 120 calendar days after June 25, 2009 or within 120 days after the source becomes subject to the standard. The Initial Notification must include the information specified in paragraphs (a)(1) through (3) of this section and may be combined with the Notification of Compliance Status required in paragraph (b) of this section.
- (1) The name and address of the owner or operator;
 - (2) The address (i.e., physical location) of the affected source; and
 - (3) An identification of the relevant standard, or other requirement, that is the basis of the notification and source's compliance date.
- (b) You must submit the Notification of Compliance Status required by §63.9(h) no later than 120 days after the applicable compliance date specified in §63.11545 unless you must conduct a performance test. If you must conduct a performance test, you must submit the Notification of Compliance Status within 60 days of completing the performance test. Your Notification of Compliance Status must indicate if you are a small or large foundry as defined in §63.11556, the production amounts as the basis for the determination, and if you are a large foundry, whether you elect to comply with the control efficiency requirement or PM concentration limit in §63.11550(b). In addition to the information required in §63.9(h)(2) and §63.11551, your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:
- (1) "This facility will operate in a manner that minimizes HAP emissions from the melting operations to the extent possible. This includes at a minimum that the owners and/or operators of the affected source will cover or enclose each melting furnace that is equipped with a cover or enclosure during melting operations to the extent practicable as required in 63.11550(a)(1)."
 - (2) "This facility agrees to purchase only metal scrap that has been depleted (to the extent practicable) of aluminum foundry HAP, copper foundry HAP, or other nonferrous foundries HAP (as applicable) in the materials charged to the melting furnace, except for metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting as required by 63.11550(a)(2)."
 - (3) "This facility has prepared and will operate by a written management practices plan according to §63.11550(a)(3)."

(4) If the owner or operator of an existing affected source at a large foundry is certifying compliance based on the results of a previous performance test: "This facility complies with §63.11550(b) based on a previous performance test in accordance with §63.11551(b)."

(5) This certification of compliance is required by the owner or operator that installs bag leak detection systems: "This facility has installed a bag leak detection system in accordance with §63.11552(b)(3) or (c), has prepared a bag leak detection system monitoring plan in accordance with §63.11552(c), and will operate each bag leak detection system according to the plan."

(c) You must keep the records specified in paragraphs (c)(1) through (5) of this section.

(1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

(2) You must keep records to document conformance with the management practices plan required by §63.11550 as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) For melting furnaces equipped with a cover or enclosure, records must identify each melting furnace equipped with a cover or enclosure and document that the procedures in the management practices plan were followed during the monthly inspections. These records may be in the form of a checklist.

(ii) Records documenting that you purchased only metal scrap that has been depleted of HAP metals (to the extent practicable) charged to the melting furnace. If you purchase scrap metal specifically for the HAP metal content for use in alloying or to meet specifications for the casting, you must keep records to document that the HAP metal is included in the material specifications for the cast metal product.

(3) You must keep the records of all performance tests, inspections and monitoring data required by §§63.11551 and 63.11552, and the information identified in paragraphs (c)(3)(i) through (vi) of this section for each required inspection or monitoring.

(i) The date, place, and time of the monitoring event;

(ii) Person conducting the monitoring;

(iii) Technique or method used;

(iv) Operating conditions during the activity;

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem (e.g., VE) to the time that monitoring indicated proper operation; and

(vi) Maintenance or corrective action taken (if applicable).

(4) If you own or operate a new or existing affected source at a small foundry that is not subject to §63.11550(b), you must maintain records to document that your facility melts less than 6,000 tpy total of copper, other nonferrous metal, and all associated alloys (excluding aluminum) in each calendar year.

(5) If you use a bag leak detection system, you must keep the records specified in paragraphs (c)(5)(i) through (iii) of this section.

(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.

(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.

(d) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. For records of annual metal melt production, you must keep the records for 5 years from the end of the calendar year. You must keep each record onsite for at least 2 years after the date of each recorded action according to §63.10(b)(1). You may keep the records offsite for the remaining 3 years.

(e) If a deviation occurs during a semiannual reporting period, you must submit a compliance report to your permitting authority according to the requirements in paragraphs (e)(1) and (2) of this section.

(1) The first reporting period covers the period beginning on the compliance date specified in §63.11545 and ending on June 30 or December 31, whichever date comes first after your compliance date. Each subsequent reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. Your compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(2) A compliance report must include the information in paragraphs (e)(2)(i) through (iv) of this section.

(i) Company name and address.

(ii) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy and completeness of the content of the report.

(iii) Date of the report and beginning and ending dates of the reporting period.

(iv) Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

[74 FR 30393, June 25, 2009, as amended at 74 FR 46495, Sept. 10, 2009]

Other Requirements and Information

§ 63.11555 What General Provisions apply to this subpart?

Table 1 to this subpart shows which parts of the General Provisions in §§63.1 through 63.16 apply to you.

§ 63.11556 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 as follows:

Aluminum foundry means a facility that melts aluminum and pours molten aluminum into molds to manufacture aluminum castings (except die casting) that are complex shapes. For purposes of this subpart, this definition does not include primary or secondary metal producers that cast molten aluminum to produce simple shapes such as sows, ingots, bars, rods, or billets.

Aluminum foundry HAP means any compound of the following metals: beryllium, cadmium, lead, manganese, or nickel, or any of these metals in the elemental form.

Annual copper and other nonferrous foundry metal melt capacity means, for new affected sources, the lower of the copper and other nonferrous metal melting operation capacity, assuming 8,760 operating hours per year or, if applicable, the maximum permitted copper and other nonferrous metal melting operation production rate for the melting operation calculated on an annual basis. Unless otherwise specified in the permit, permitted copper and other nonferrous metal melting operation 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 melting operation(s) or

foundry, then the permitted operating hours are used to annualize the maximum permitted copper and other nonferrous metal melt production rate. The annual copper and other nonferrous metal melt capacity does not include the melt capacity for ferrous metal melted in iron or steel foundry melting operations that are co-located with copper or other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Annual copper and other nonferrous foundry metal melt production means, for existing affected sources, the quantity of copper and other nonferrous metal melted in melting operations at the foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis of the quantity of metal charged to the melting operations. The annual copper and nonferrous metal melt production does not include the melt production of ferrous metal melted in iron or steel foundry melting operations that are co-located with copper and other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Annual metal melt capacity, for new affected sources, means the lower of the aluminum, copper, and other nonferrous metal melting operation capacity, assuming 8,760 operating hours per year or, if applicable, the maximum permitted aluminum, copper, and other nonferrous metal melting operation production rate for the melting operation calculated on an annual basis. Unless otherwise specified in the permit, permitted aluminum, copper, and other nonferrous metal melting operation 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 melting operation(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted aluminum, copper, and other nonferrous metal melt production rate. The annual metal melt capacity does not include the melt capacity for ferrous metal melted in iron or steel foundry melting operations that are co-located with aluminum, copper, or other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Annual metal melt production means, for existing affected sources, the quantity of aluminum, copper, and other nonferrous metal melted in melting operations at the foundry in a given calendar year. For the purposes of this subpart, annual metal melt production is determined on the basis of the quantity of metal charged to the melting operations. The annual metal melt production does not include the melt production of ferrous metal melted in iron or steel foundry melting operations that are co-located with aluminum, copper, or other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Bag leak detection system means a system that is capable of continuously monitoring relative PM (*i.e.*, 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, light scattering, light transmittance, or other effect to continuously monitor relative PM loadings.

Copper foundry means a foundry that melts copper or copper-based alloys and pours molten copper or copper-based alloys into molds to manufacture copper or copper-based alloy castings (excluding die casting) that are complex shapes. For purposes of this subpart, this definition does not include primary or secondary metal producers that cast molten copper to produce simple shapes such as sows, ingots, billets, bars, anode copper, rods, or copper cake.

Copper foundry HAP means any compound of any of the following metals: lead, manganese, or nickel, or any of these metals in the elemental form.

Deviation means any instance where an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emissions limitation or work practice standard;
- (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 affected source required to obtain such a permit; or
- (3) Fails to meet any emissions limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Die casting means operations classified under the North American Industry Classification System codes 331521 (Aluminum Die-Casting Foundries) and 331522 (Nonferrous (except Aluminum) Die-Casting Foundries) and

comprises establishments primarily engaged in introducing molten aluminum, copper, and other nonferrous metal, under high pressure, into molds or dies to make die-castings.

Large foundry means, for an existing affected source, a copper or other nonferrous foundry with an annual metal melt production of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of 6,000 tons or greater. For a new affected source, *large foundry* means a copper or other nonferrous foundry with an annual metal melt capacity of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of 6,000 tons or greater.

Material containing aluminum foundry HAP means a material containing one or more aluminum foundry HAP. Any material that contains beryllium, cadmium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing aluminum foundry HAP.

Material containing copper foundry HAP means a material containing one or more copper foundry HAP. Any material that contains lead or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing copper foundry HAP.

Material containing other nonferrous foundry HAP means a material containing one or more other nonferrous foundry HAP. Any material that contains chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing other nonferrous foundry HAP.

Melting operations (the affected source) means the collection of furnaces (e.g., induction, reverberatory, crucible, tower, dry hearth) used to melt metal ingot, alloyed ingot and/or metal scrap to produce molten metal that is poured into molds to make castings. Melting operations dedicated to melting ferrous metal at an iron and steel foundry are not included in this definition and are not part of the affected source.

Other nonferrous foundry means a facility that melts nonferrous metals other than aluminum, copper, or copper-based alloys and pours the nonferrous metals into molds to manufacture nonferrous metal castings (excluding die casting) that are complex shapes. For purposes of this subpart, this definition does not include primary or secondary metal producers that cast molten nonferrous metals to produce simple shapes such as sows, ingots, bars, rods, or billets.

Other nonferrous foundry HAP means any compound of the following metals: chromium, lead, and nickel, or any of these metals in the elemental form.

Small foundry means, for an existing affected source, a copper or other nonferrous foundry with an annual metal melt production of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of less than 6,000 tons. For a new affected source, *small foundry* means a copper or other nonferrous foundry with an annual metal melt capacity of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of less than 6,000 tons.

§ 63.11557 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority, such as your State, local, or Tribal agency. If the U.S. 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 U.S. EPA Regional Office to find out if 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 Administrator of the U.S. EPA and are not transferred to the State, local, or Tribal agency.

(c) The authorities that will not be delegated to State, local, or Tribal agencies are listed in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the applicability requirements in §63.11544, the compliance date requirements in §63.11545, and the applicable standards in §63.11550.

(2) Approval of an alternative nonopacity emissions standard under §63.6(g).

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

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

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

§ 63.11558 [Reserved]

Table 1 to Subpart ZZZZZZ of Part 63—Applicability of General Provisions to Aluminum, Copper, and Other Nonferrous Foundries Area Sources

As required in §63.11555, “What General Provisions apply to this subpart?,” you must comply with each requirement in the following table that applies to you.

Citation	Subject	Applies to subpart ZZZZZZ?	Explanation
§63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)–(a)(12), (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e)	Applicability	Yes	§63.11544(f) exempts affected sources from the obligation to obtain a title V operating permit.
§63.1(a)(5), (a)(7)–(a)(9), (b)(2), (c)(3), (c)(4), (d)	Reserved	No	
§63.2	Definitions	Yes	
§63.3	Units and Abbreviations	Yes	
§63.4	Prohibited Activities and Circumvention	Yes	
§63.5	Preconstruction Review and Notification Requirements	Yes	
§63.6(a), (b)(1)–(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1), (e)(3)(i), (e)(3)(iii)–(e)(3)(ix), (f)(2), (f)(3), (g), (i), (j)	Compliance with Standards and Maintenance Requirements	Yes	
§63.6(f)(1)	Compliance with Nonopacity Emission Standards	No	Subpart ZZZZZZ requires continuous compliance with all requirements in this subpart.
§63.6(h)(1), (h)(2), (h)(5)–(h)(9)	Compliance with Opacity and Visible Emission Limits	No	Subpart ZZZZZZ does not contain opacity or visible emission limits.
§63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv)	Reserved	No	
§63.7	Applicability and Performance Test Dates	Yes	

§63.8(a)(1), (b)(1), (f)(1)–(5), (g)	Monitoring Requirements	Yes	
§63.8(a)(2), (a)(4), (b)(2)–(3), (c), (d), (e), (f)(6), (g)	Continuous Monitoring Systems	No	Subpart ZZZZZZ does not require a flare or CPMS, COMS or CEMS.
§63.8(a)(3)	[Reserved]	No	
§63.9(a), (b)(1), (b)(2)(i)–(iii), (b)(5), (c), (d), (e), (h)(1)–(h)(3), (h)(5), (h)(6), (j)	Notification Requirements	Yes	Subpart ZZZZZZ requires submission of Notification of Compliance Status within 120 days of compliance date unless a performance test is required.
§63.9(b)(2)(iv)–(v), (b)(4), (f), (g), (i)	No		
§63.9(b)(3), (h)(4)	Reserved	No	
§63.10(a), (b)(1), (b)(2)(i)–(v), (vii), (vii)(C), (viii), (ix), (b)(3), (d)(1)–(2), (d)(4), (d)(5), (f)	Recordkeeping and Reporting Requirements	Yes	
§63.10(b)(2)(vi), (b)(2)(vii)(A)–(B), (c), (d)(3), (e)	No	Subpart ZZZZZZ does not require a CPMS, COMS, CEMS, or opacity or visible emissions limit.	
§63.10(c)(2)–(c)(4), (c)(9)	Reserved	No	
§63.11	Control Device Requirements	No	
§63.12	State Authority and Delegations	Yes	
§§63.13–63.16	Addresses, Incorporations by Reference, Availability of Information, Performance Track Provisions		

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

Attachment B

Title 40: Protection of Environment

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §63.6625(c),

63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;

(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or

(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

C_i = concentration of CO or formaldehyde at the control device inlet,

C_o = concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³ / J (dscf/10⁶ Btu).

F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³ / J (dscf/10⁶ Btu).

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

X_{CO₂} = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂ - 15 percent O₂, the defined O₂ correction value, percent.

(iii) Calculate the NO_x and SO₂ gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 4})$$

Where:

%CO₂ = Measured CO₂ concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO₂ at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (5) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start landfill or digester gas stationary RICE located at an area source of HAP emissions;

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

- (a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.
- (b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
- (c) [Reserved]
- (d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).
- (e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.
- (f) *Requirements for emergency stationary RICE.* (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of

HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions

taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40

CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with

the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether 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 Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (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 affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x, CO, and volatile organic compounds (VOC) into CO₂, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C₃H₈.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart P of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011]

Table 1ato Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂	

¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions and Existing Spark Ignition 4SRB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions and existing 4SRB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O ₂ and using NSCR.	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O ₂ and not using NSCR.	Comply with any operating limitations approved by the Administrator.

Table 2ato Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂	

¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

Table 2bto Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing Compression Ignition Stationary RICE >500 HP, and Existing 4SLB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and compression ignition stationary RICE located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; existing compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Table 2cto Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ² b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ³
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; ²	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O ₂	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15	

	percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ²	
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ²	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. ³	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ²	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. ³	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O ₂	

10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O ₂	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O ₂	
12. Non-emergency, non-black start landfill or digester gas-fired stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O ₂	

¹If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

²Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

³Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

Table 2dto Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; ¹	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and	

	belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 93 percent or more.	
9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually,	

	whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O ₂ ; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE with a brake horsepower >500 located at major sources; new or reconstructed 4SLB stationary RICE with a brake horsepower ≥250 located at major sources; and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed 4SLB stationary RICE with a brake horsepower 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

¹After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^a (incorporated by reference, see §63.14). Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^{ab} (incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O ₂ , dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00m (2005)	(a) Measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03, ^c provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005)	(a) Measurements to determine O ₂ concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, ^c provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), ^a Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03	(a) CO Concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour longer runs.

^aYou may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

^bYou may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

^cYou may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP,	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and

<p>and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>		<p>ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.</p>
<p>5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Reduce CO emissions, and using a CEMS</p>	<p>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.</p>
<p>6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Limit the concentration of CO, and using a CEMS</p>	<p>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and</p>
		<p>iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.</p>
<p>7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Reduce formaldehyde emissions and using NSCR</p>	<p>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</p>

		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of formaldehyde and not using NSCR	i. The average formaldehyde concentration determined from the initial performance test is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
11. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating

		parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
13. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

[76 FR 12867, Mar. 9, 2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; ^a and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located	a. Reduce CO emissions and not using an	i. Conducting semiannual performance tests for CO to

<p>at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥ 250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE > 500 HP located at a major source of HAP</p>	<p>oxidation catalyst, and using a CPMS</p>	<p>demonstrate that the required CO percent reduction is achieved;^a and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</p>
<p>3. New or reconstructed non-emergency 2SLB stationary RICE > 500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥ 250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE > 500 HP located at a major source of HAP, existing non-emergency stationary CI RICE > 500 HP, existing non-emergency 4SLB stationary RICE > 500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS</p>	<p>i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.</p>
<p>4. Non-emergency 4SRB stationary RICE > 500 HP located at a major source of HAP</p>	<p>a. Reduce formaldehyde emissions and using NSCR</p>	<p>i. Collecting the catalyst inlet temperature data according to §63.6625(b); and</p>
		<p>ii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</p>
		<p>iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</p>
<p>5. Non-emergency 4SRB stationary RICE > 500 HP located at a major source of HAP</p>	<p>a. Reduce formaldehyde emissions and not using NSCR</p>	<p>i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and</p>

		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP $\geq 5,000$ located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved. ^a
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; ^a and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; ^a and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤ 500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP,	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or

<p>existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year</p>		<p>ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p>
<p>10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE</p>	<p>a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR</p>	<p>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and</p>
		<p>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and</p>
		<p>iii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</p>
		<p>v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</p>
<p>11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE</p>	<p>a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR</p>	<p>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and</p>
		<p>ii. Collecting the approved operating</p>

		parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling

		averages within the operating limitations for the operating parameters established during the performance test.
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^aAfter you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[76 FR 12870, Mar. 9, 2011]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
1. Existing non-emergency, non-black start stationary RICE $100 \leq HP \leq 500$ located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP and operated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq HP \leq 500$ located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4)	i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in §63.6650(b). i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more	i. Annually, according to the requirements in §63.6650.

		of the gross heat input on an annual basis; and	
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.

[75 FR 51603, Aug. 20, 2010]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	

§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.

§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.

		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.

§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

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

Addendum to the Technical Support Document (ATSD) for
a Minor Source Operating Permit (MSOP) Transitioning to a Federally
Enforceable State Operating Permit (FESOP) with New Source Review
(NSR)

Source Background and Description

Source Name:	Howmet Castings and Services, Inc.
Source Location:	1110 East Lincolnway, LaPorte, Indiana 46350
County:	LaPorte
SIC Code:	3369 (Nonferrous Foundries, Except Aluminum and Copper)
Operation Permit No.:	F 091-31556-00047
Permit Reviewer:	Brian Williams

On August 25, 2012, the Office of Air Quality (OAQ) had a notice published in the LaPorte Herald - Argus, LaPorte, Indiana, stating that Howmet Castings and Services, Inc. had applied for a transition from MSOP to FESOP with NSR due to the construction and operation of new emission units at an existing metal alloy casting plant. In addition, Howmet Castings and Services, Inc. determined that their potential emissions exceed MSOP thresholds. The notice also stated that the OAQ proposed to issue a FESOP with NSR 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.

Comments and Responses

On September 20, 2012, Howmet Castings and Services, Inc. submitted comments to IDEM, OAQ on the draft FESOP with NSR.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

The emission unit descriptions in Sections A.2 and D.1 indicate that the source has twenty-three (23) sanding towers. However, the source has determined the correct number is twenty-two (22).

Response to Comment 1:

IDEM agrees with the recommended changes. The permit has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

...

(b) One (1) Ceramic Mold Operation, with a nominal capacity of 0.66 tons of metal and ceramic molds per hour, consisting of the following:

...

(3) ~~Twenty-three~~**two (22)** sanding towers, identified as STUCCO-TWR-7 through STUCCO-TWR-22, ~~and~~ STUCCO-TWR-24 through STUCCO-TWR-~~3026~~, ~~and~~

STUCCO-TWR-28 through STUCCO-TWR-30, constructed in 1991, with a combined nominal capacity of 0.66 tons per hour of sand, with particulate controlled by a baghouse with High Efficiency Particulate Air (HEPA) filters, identified as DUST-COLL-MONO-FARR, and exhausting back into the Monoshell Department;

...
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:	
...	
(b)	One (1) Ceramic Mold Operation, with a nominal capacity of 0.66 tons of metal and ceramic molds per hour, consisting of the following:
...	
(3)	Twenty- three ^{two} (22) sanding towers, identified as STUCCO-TWR-7 through STUCCO-TWR-22, and STUCCO-TWR-24 through STUCCO-TWR- 3026 , and STUCCO-TWR-28 through STUCCO-TWR-30 , constructed in 1991, with a combined nominal capacity of 0.66 tons per hour of sand, with particulate controlled by a baghouse with High Efficiency Particulate Air (HEPA) filters, identified as DUST-COLL-MONO-FARR, and exhausting back into the Monoshell Department;
...	

Comment 2:

The dewax furnace is an insignificant activity as specified in 326 IAC 2-7-1(21). Therefore, this emission unit should be listed in Section A.3 - Insignificant Activities instead of Section A.2 - Emission Units and Pollution Control Equipment Summary.

Response to Comment 2:

The dewax furnace is not specifically listed as an insignificant activity in 326 IAC 2-7-1(21)(G) through (J), but has a potential to emit less than the thresholds specified in 326 IAC 2-7-1(21)(E) and (F). However, the dewax furnace is part of the ceramic mold operation, which has a combined total potential to emit greater than the thresholds specified in 326 IAC 2-7-1(21)(E) and (F). Therefore, the dewax furnace cannot be considered an insignificant activity because the ceramic mold operation is a significant activity at this source. No changes were made as a result of this comment.

Comment 3:

The nine (9) natural gas-fired shell preheater ovens are insignificant activities as specified in 326 IAC 2-7-1(21). Therefore, these emission units should be listed in Section A.3 - Insignificant Activities instead of Section A.2 - Emission Units and Pollution Control Equipment Summary. These units should also be designated as insignificant activities in Section D.1. Finally, please correct a typographical error in the electric induction oven descriptions in Sections A.2, D.1, and E.1.

Response to Comment 3:

IDEM agrees with the recommended changes, since the nine (9) natural gas-fired shell preheater ovens are insignificant activities as specified in 326 IAC 2-7-1(21)(J)(i)(AA), because they are natural gas-fired process heaters each with a heat input equal to or less than ten (10) million British thermal units per hour. IDEM also agrees with the recommended changes to the electric induction oven descriptions. The permit has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

...

- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.6 tons per hour of metal, consisting of:
- (1) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-02, constructed in 1987, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 2P.~~
 - (2) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR-PREHEAT-02, constructed in 1994, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 2P1.~~
 - (3) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-04, constructed in 1988, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 4P.~~
 - (4) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-05, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 5P.~~
 - (5) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-06, constructed in 1990, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 6P.~~
 - (6) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR-PREHEAT-06, constructed in 1991, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 6P1.~~
 - (7) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-09, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 9P.~~
 - (8) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-10, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 10P.~~
 - (9) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR-PREHEAT-10, constructed in 1988, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 10P1.~~
 - (10) One (1) Electric Induction Ovens, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (112) One (1) Electric Induction Ovens, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - (123) One (1) Electric Induction Ovens, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (134) One (1) Electric Induction Ovens, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - (145) One (1) Electric Induction Ovens, identified as VACUUM-CAST-09, constructed

before 2000, uncontrolled, and exhausting to the indoors.

- (456) One (1) Electric Induction Ovens, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.

Under 40 CFR 63, Subpart ZZZZZZ, the six (6) electric induction ovens are considered affected sources.

- (467) One (1) mold hot topping process, constructed before 2000, with a nominal ferrux usage rate of 250,000 pounds per year, uncontrolled, and exhausting to the indoors.

...

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
- (1) One (1) natural gas-fired hot water heater, constructed in 1989, with a nominal rated heat input of 0.65 MMBtu/hr, exhausting to stack HW01. This is a trivial emission unit;
 - (2) One (1) natural gas-fired boiler, identified as BOILER-EAST, constructed in 1991, with nominal rated heat input of 4.2 MMBtu/hr, exhausting to stacks B3.
 - (3) One (1) natural gas-fired boiler, identified as BOILER-HUMIDITY, constructed in 1991, with nominal rated heat input of 2.3 MMBtu/hr, exhausting to stacks B1.
 - (4) One (1) natural gas-fired boiler, identified as BOILER-DEGREASE, constructed in 1994, with nominal rated heat input of 1.4 MMBtu/hr, exhausting to stacks O4H.
 - (5) Miscellaneous natural gas-fired space heaters totaling a nominal of 0.10 MMBtu/hr heat input. These are trivial emission units.
 - (6) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-02, constructed in 1987, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 2P.**
 - (7) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-02, constructed in 1994, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 2P1.**
 - (8) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-04, constructed in 1988, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 4P.**
 - (9) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-05, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 5P.**
 - (10) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-06, constructed in 1990, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 6P.**

- (11) **One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-06, constructed in 1991, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 6P1.**
- (12) **One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-09, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 9P.**
- (13) **One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-10, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 10P.**
- (14) **One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-10, constructed in 1988, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 10P1.**

...
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

...

- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.6 tons per hour of metal, consisting of:
 - (1) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-02, constructed in 1987, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 2P.~~
 - (2) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-02, constructed in 1994, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 2P1.~~
 - (3) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-04, constructed in 1988, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 4P.~~
 - (4) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-05, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 5P.~~
 - (5) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-06, constructed in 1990, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 6P.~~
 - (6) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-06, constructed in 1991, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 6P1.~~
 - (7) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-09, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 9P.~~
 - (8) ~~One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-10, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 10P.~~

- ~~(9)~~ One (1) Natural Gas Fired Shell Preheater Oven, identified as JR PREHEAT-10, constructed in 1988, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 10P1.
 - (10) One (1) Electric Induction Ovens, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - ~~(112)~~ One (1) Electric Induction Ovens, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - ~~(123)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - ~~(134)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - ~~(145)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-09, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - ~~(156)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.
- Under 40 CFR 63, Subpart ZZZZZZ, the six (6) electric induction ovens are considered affected sources.
- ~~(167)~~ One (1) mold hot topping process, constructed before 2000, with a nominal ferrux usage rate of 250,000 pounds per year, uncontrolled, and exhausting to the indoors.
- ...

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

- Emissions Unit Description:
- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.59 tons per hour of metal, consisting of:
 - (10) One (1) Electric Induction Ovens, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - ~~(112)~~ One (1) Electric Induction Ovens, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - ~~(123)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - ~~(134)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - ~~(145)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-09, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - ~~(156)~~ One (1) Electric Induction Ovens, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.
- ...

Comment 4:

Please revise the emission unit description in Sections A.2 and D.2 to indicate that the carter day baghouse now only exhausts to two (2) stacks (ZK1 and ZK2) instead of three (3) stacks (ZK1, ZK2, and ZK3).

Response to Comment 4:

IDEM agrees with the recommended changes, since it is a change to descriptive information. The permit has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

...

- (g) Finishing Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by one (1) baghouse, identified as Carter Day, which was constructed before 2000, and exhausting to stacks ZK1, ~~and ZK2, and ZK3~~ and one (1) baghouse, identified as West Metals, which was constructed in 2008, and exhausting to stack ZK5. The finishing operations consist of the following:

...

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

...

- (g) Finishing Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by one (1) baghouse, identified as Carter Day, which was constructed before 2000, and exhausting to stacks ZK1, ~~and ZK2, and ZK3~~ and one (1) baghouse, identified as West Metals, which was constructed in 2008, and exhausting to stack ZK5. The finishing operations consists of the following:

...

Comment 5:

Revise the emission unit description for the pressure washing operations in Section A.3 to clarify that these operations remove residual amounts of shell from cast metal pieces.

Response to Comment 5:

IDEM agrees with the recommended changes, since it is a change to descriptive information. The permit has been revised as follows:

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

...

- (e) Pressure washing operations, constructed in 1991 and modified in 2009 and 2010, using hydraulic water to remove residual amounts of **shell from cast** metal ~~work~~-pieces in enclosed booths, exhausting outside of the building.

Comment 6:

IDEM has inappropriately added particulate matter (PM) emission limits in Condition D.1.1 to the existing sanding towers to render the requirement of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. The existing sanding towers should not have limits placed upon them for PSD, nor is this permit issued for PSD avoidance. The limiting factor for PM emissions is one hundred (100) tons per year source-wide for FESOP, not PSD. This condition should be removed the permit.

Response to Comment 6:

The PM emissions limit for the sanding towers in Condition D.1.1 is correct because, under the Part 70 Permit program (40 CFR 70), PM is not considered as a "regulated air pollutant". By law, IDEM cannot regulate PM emissions under 326 IAC 2-7 (Part 70 Permit Program) or 326 IAC 2-8 (FESOP). As a result, PM emissions are regulated under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)). Pursuant to 326 IAC 2-2-1(ff)(2), any stationary source with the potential to emit two hundred fifty (250) tons per year or more of a regulated NSR pollutant (i.e. PM) is a major stationary source and subject to the requirements of 326 IAC 2-2 (PSD). This source has an unlimited potential to emit 1,364.0 tons of PM per year. In order to render the requirements of 326 IAC 2-2 (PSD) not applicable IDEM has limited the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period. No changes were made as a result of this comment.

Comment 7:

The PM10 and PM2.5 emission limits in Condition D.1.2 inappropriately reference to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)). PSD avoidance is not applicable to these emission units because the PM10 and PM2.5 emissions are limited to less than 100 tons per year, each, in order to render 326 IAC 2-7 (Part 70 Permits) not applicable.

Response to Comment 7:

Referencing 326 IAC 2-2 in Condition D.1.2 is correct because the PM10 and PM2.5 limits pursuant to 326 IAC 2-8, at the same time, also renders PSD not applicable. Pursuant to 326 IAC 2-7-1(22), a major source is a stationary source that directly emits or has the potential to emit, one hundred (100) tons per year or more of any air pollutant subject to regulation (including any major source of fugitive emissions of any such pollutant, as determined by the U.S. EPA by rule). 326 IAC 2-7-1(32) defines a regulated pollutant as any pollutant for which a national ambient air quality standard (NAAQS) has been promulgated. Under 40 CFR Part 50, NAAQS have been established for PM10 and PM2.5. Therefore, in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable and remain a minor source for PM10 and PM2.5 emissions, IDEM has limited PM10 and PM2.5 emissions to less than 100 tons per year, each. In addition, IDEM is required to review PM10 and PM2.5 emissions pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. Pursuant to 326 IAC 2-2-1(ff)(2), any stationary source with the potential to emit two hundred fifty (250) tons per year or more of a regulated NSR pollutant is a major stationary source and subject to the requirements of 326 IAC 2-2 (PSD). PM10 and PM2.5 are regulated NSR pollutants and this source has an unlimited potential to emit 1,364.10 tons of PM10 and PM2.5 per year, each. Compliance with the PM10 and PM2.5 emission limits under 326 IAC 2-8-4, also renders the requirements of 326 IAC 2-2 (PSD) not applicable. No changes were made as a result of this comment.

Comment 8:

IDEM has assigned PM10 and PM2.5 permit limits and required testing for the sanding tower dust collector DUST-COLL-MONO-FARR.1. This unit should not have permit limits associated with it without basis. The exhaust from this unit discharges back into the building as make-up air. During the application process, IDEM never provided any discussion of this unit until the public notice issuance that disclosed unsubstantiated permit limits with testing requirements for an emission unit that discharges into the building as make up air. Therefore, the testing and parametric monitoring requirements for the sanding towers should be removed because this unit discharges inside the building for make-up air. In addition, the parametric monitoring requirement is un-necessary because an effective preventive maintenance program is in place along with stringent NIOSH - OSHA employee hygiene programs to ensure effective operation. Finally, IDEM should remove the associated record keeping requirements.

Response to Comment 8:

During the applicant review period prior to the public noticing of this permit, Howmet Castings and Services, Inc. provided new potential to emit calculations for the sanding towers based on mass balance loading estimates performed by the source. As a result, the unlimited potential to emit PM, PM10, and PM2.5 for the sanding towers increased from 10.41 tons per year to 112.66 tons per year, each. In order to remain a FESOP and minor source for PSD, IDEM proposed to limit the PM emissions to 3.10 pounds per hour (13.59 tons per year) and PM10 and PM2.5 emissions to 2.57 pounds per hour, each (11.27 tons per year, each). Based on the unlimited potential to emit the baghouse would have to achieve a control efficiency of approximately 88 percent to comply with the PM emission limit and 90 percent to comply with the PM10 and PM2.5 emissions limits. Therefore, the source must perform emission testing to verify that the sanding tower baghouse can comply with the emission limits. The fact that the emissions from this unit exhaust indoors does not preclude IDEM from requiring emission testing to verify compliance with the emission limits. Pursuant to IDEM's Compliance Monitoring Guidance, the source is required to monitor and keep records of the pressure drop of the baghouse because the emission unit is subject to emission limitations to avoid applicable state and federal requirements. Once the source has satisfactorily demonstrated compliance with the emission limits they can petition IDEM OAQ to re-evaluate if testing and parametric monitoring is required for this emission unit or to reduce the testing or parametric monitoring frequency.

IDEM's Compliance Monitoring Guidance is available on the Internet at:
http://www.in.gov/idem/files/permits_guide_air_compliance_monitoring_guidance.pdf

No changes were made as a result of this comment.

Comment 9:

IDEM has mischaracterized the dewax furnace as an incinerator that burns solid wastes. The DEWAX BIG BERTHA is not designed to burn solid wastes. The wax from the lost wax process is not a solid waste. Because the incinerator regulations were not intended to cover process furnaces, the regulatory language at 326 IAC 4-2 specifies the requirement of having primary and secondary chambers or equivalent as well as having particulate matter limits specified at D.1.4(e)(2), which are not appropriate.

Response to Comment 9:

326 IAC 1-2-34 defines an incinerator as an engineered apparatus that burns waste substances with controls on combustion factors including, but not limited to, temperature, retention time, and air. Based on the information provided to IDEM, the natural gas-fired dewax furnace is used to destroy any wax pattern cluster components trapped inside the ceramic shell assembly. The residual wax pattern cluster components inside the ceramic shell assembly are considered a waste, since it is undesired in the finished ceramic mold. Therefore, the dewax furnace is subject to the requirements of 326 IAC 4-2-1 because this furnace meets the definition of an incinerator provided in 326 IAC 1-2-34 and is not subject to any of the rules identified in 326 IAC 4-2-1(b)(2). No changes were made as a result of this comment.

Comment 10:

Condition D.2.1 - Particulate Matter of the draft permit contains PM emission limits for the pneumatic shell removal, post-cast, and finishing operations. PSD avoidance is not applicable to these existing sources because FESOP requirements limit the source-wide potential to emit to less than one hundred (100) tons of PM per year, less than ten (10) tons of any single hazardous air pollutant (HAP) and twenty-five (25) tons of any combination of HAPs per year in order to render Title V not applicable. Therefore, remove reference to PSD and apply FESOP limits only.

Response to Comment 10:

IDEM does not agree with the requested change. Please see Responses to Comments 6 and 7 for more information. No changes were made as a result of this comment.

Comment 11:

IDEM has arbitrarily required perpetual testing for the pneumatic shell removal without basis or cause in Condition D.2.6(a). This source only emits particulate emissions and was previously tested in 2003. The results of the testing demonstrated that this process emits 0.24 pounds of PM per hour and 0.237 pounds of PM10 per hour, after controls. Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the allowable PM emissions from this process is 2.88 pounds per hour. Since there is a disparity between the actual tested emissions in 2003 and the 326 IAC 6-3-2 allowable emissions, testing should not be required for this source to demonstrate emissions less than 2.88 lbs/hr. At a minimum, IDEM should remove the perpetual testing requirement for this source. Testing should be required only once to demonstrate compliance with 326 IAC 6-3-2 and should be done off-permit. In addition, reference to section D.2.1 regarding PSD is incorrect and should be removed.

Response to Comment 11:

Based on mass balance loading estimates performed by the source, the unlimited potential to emit PM, PM10, and PM2.5 for the pneumatic shell removal process is 213.87 tons per year, each. In order to remain a FESOP and minor source for PSD, IDEM proposed to limit the PM emissions to 5.76 pounds per hour (25.22 tons per year) and PM10 and PM2.5 emissions to 2.44 pounds per hour, each (10.69 tons per year, each). Based on the unlimited potential to emit the baghouse would have to achieve a control efficiency of approximately 88 percent to comply with the PM emission limit and 95 percent to comply with the PM10 and PM2.5 emissions limits. Therefore, the source must perform emission testing to verify that the pneumatic shell removal baghouse can comply with the emission limits. In addition, the source must repeat the test once every five (5) years to demonstrate ongoing compliance with the emission limits. Once the source has satisfactorily demonstrated compliance with the emission limits they can petition IDEM OAQ to reconsider if testing is required for this emission unit or to reduce the testing frequency. Please see Responses to Comments 6 and 7 for more information regarding PSD applicability.

No changes were made as a result of this comment.

Comment 12:

The testing requirements in Conditions D.2.6(b) incorrectly reference Condition D.2.1, which contains PSD avoidance limits for PM. PSD is not applicable for the post-cast, carter day, and west metals baghouses. Therefore, reference to Condition D.2.1 regarding PSD is incorrect and should be removed from the permit. We also believe that requiring perpetual testing for these emissions units is not necessary to demonstrate compliance with the FESOP requirement of actual PM10 emissions less than 100 tons per year as well as the allowable emissions under 326 IAC 6-3-2. As a result, we are requesting a one time test to demonstrate compliance with FESOP emissions limitations.

Response to Comment 12:

Based on mass balance loading estimates performed by the source, the unlimited potential to emit PM, PM10, and PM2.5 for the post-cast, carter day, and west metals baghouses are 231.77, 357.03, and 397.46 tons per year, each, respectively. In order to remain a FESOP and minor source for PSD, IDEM proposed to limit the PM, PM10, and PM2.5 emissions from each baghouse to 12.61 tons per year, each (2.88 pounds per hour, each). Based on the unlimited potential to emit the post-cast baghouse would have to achieve a control efficiency of approximately 95 percent to comply with the PM, PM10, and PM2.5 emission limits. The carter day and west metals baghouses would each have to achieve a control efficiency of approximately 97 percent to comply with the PM, PM10, and PM2.5 emission limits. Therefore, the source must perform emission testing to verify that each baghouse can comply with the emission limits. In addition, the source must repeat the test once every five (5) years to demonstrate ongoing compliance with the emission limits. Once the source has satisfactorily demonstrated compliance with the emission limits they can petition IDEM OAQ to reconsider if testing is required for each emission unit or to reduce the testing frequency. Please see Responses to Comments 6 and 7 for more information regarding PSD applicability.

No changes were made as a result of this comment.

Comment 13:

We believe that requiring perpetual testing of the post-cast, carter day, and west metals baghouses for metal HAPs is not necessary to demonstrate compliance with the metal HAPs emission limits in Condition D.2.2(b). As a result, we are requesting a one time test to demonstrate compliance with FESOP emissions limitations.

Response to Comment 13:

Based on mass balance loading estimates performed by the source, the total unlimited potential to emit of metal HAPs from the post-cast, carter day, and west metals baghouses is 52.46 tons of nickel per year, 13.60 tons of chromium per year, and 5.68 tons of cobalt per year. In order to remain a FESOP and an area source for HAPs, IDEM proposed to limit the emissions of chromium to 1.82 tons per year, nickel to 7.60 tons per year, and cobalt to 0.73 tons per year. IDEM also limited the total combination of any metal HAPs to 10.16 tons per year. Based on the unlimited potential to emit these operations would have to achieve an average control efficiency of approximately 87 percent to comply with the metal HAPs emission limits. Therefore, the source must perform emission testing to verify that the source can comply with the emission limits. In addition, the source must repeat the test once every five (5) years to demonstrate ongoing compliance with the emission limits. Once the source has satisfactorily demonstrated compliance with the emission limits they can petition IDEM OAQ to reconsider if testing is required for each emission unit or to reduce the testing frequency.

No changes were made as a result of this comment.

Comment 14:

Alcoa Howmet believes that daily parametric monitoring in Condition D.2.7 is excessive and unwarranted for these emissions control units. The pressure differential on these units does not vary to any noticeable degree on a daily basis to warrant such intensive monitoring. We are concerned that requiring employees to conduct daily monitoring when there is little if any noticeable change may lead to monitoring complacency when the task is perceived as little more than 'busy work'. These units have operated without incident for many years under the Alcoa Howmet preventive maintenance program to ensure compliant operations. Because of this, Howmet believes that it is more appropriate and meaningful to conduct weekly parametric monitoring instead of daily parametric monitoring of pressure differential for the pneumatic shell removal, post cast, carter day, and west metal bag houses. Therefore, Conditions D.2.7 and D.2.9(a) should be revised from once per day to once per week.

Response to Comment 14:

Pursuant to IDEM's Compliance Monitoring Guidance, the source is required to monitor and keep records of the pressure drop of the baghouses daily because the emission units are subject to emission limitations to avoid applicable state and federal requirements.

IDEM's Compliance Monitoring Guidance is available on the Internet at:
http://www.in.gov/idem/files/permits_guide_air_compliance_monitoring_guidance.pdf

No changes were made as a result of this comment.

Comment 15:

Please note that the pressure drop ranges indicated by IDEM in Condition D.2.7- Parametric Monitoring are not accurately reflective of the pressure drop on the specific equipment at Howmet LaPorte. The normal range for the knock out, post cast, carter day, and west metal cell baghouses is a pressure drop between 0.2 and 8.0 inches of water.

Response to Comment 15:

IDEM agrees with the recommended changes, since this information was not available at the time the permit was public noticed. The permit has been revised as follows:

...

D.2.7 Parametric Monitoring

The Permittee shall record the pressure drop across the pneumatic shell removal, post-cast, carter day, and west metals baghouses used in conjunction with the pneumatic shell removal, post-cast, and finishing operations, at least once per day when any of the processes are in operation. When for any one reading, the pressure drop across each baghouse is outside the normal range, the Permittee shall take reasonable response. The normal range for each unit is a pressure drop between ~~4.0~~ **0.2** and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

...

Comment 16:

Please note that the 326 IAC 6-2-3(d) particulate emissions limit of 0.8 pounds per MMBtu heat input is substantially greater than the AP-42 emission factor. At a heating value of 1,000 BTU/ft³, the AP-42 particulate emissions rate is only 0.0019 lbs per MMBtu which is much lower than the 326 IAC 6-2-3(d) particulate emissions limit.

Response to Comment 16:

IDEM agrees with the comment. However, no changes were made as a result of this comment.

Comment 17:

Please revise Condition E.1.1 as follows:

...

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries [326 IAC 20-1] [40 CFR Part 63]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions **as applicable**, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR 63, Subpart ZZZZZZ.

...

Response to Comment 17:

IDEM agrees with the recommended changes. The permit has been revised as requested above.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (a) IDEM has removed the miscellaneous natural gas-fired space heaters from Section D.3 since there are no applicable requirements for these emission units.

...

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

...

Insignificant Activities consisting of:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:

...

- ~~(5) Miscellaneous natural gas-fired space heaters totaling a nominal of 0.10 MMBtu/hr heat input. These are trivial emission units.~~

...

IDEM Contact

- (a) Questions regarding this proposed FESOP with NSR can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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

Technical Support Document (TSD) for a Minor Source Operating Permit
(MSOP) Transitioning to a Federally Enforceable State Operating Permit
(FESOP) with New Source Review (NSR)

Source Description and Location

Source Name:	Howmet Castings and Services, Inc.
Source Location:	1110 East Lincolnway, LaPorte, Indiana 46350
County:	LaPorte
SIC Code:	3369 (Nonferrous Foundries, Except Aluminum and Copper)
Operation Permit No.:	F 091-31556-00047
Permit Reviewer:	Brian Williams

On February 28, 2012, the Office of Air Quality (OAQ) received an application from Howmet Castings and Services, Inc. (formerly Howmet LaPorte Casting) related to the construction and operation of new emission units at an existing metal alloy casting plant and transition from a MSOP to a FESOP.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) MSOP Renewal No. 091-21153-00047, issued on September 21, 2006;
- (b) First Notice-Only Change No. 091-23654-00047, issued on January 26, 2007;
- (c) Second Notice-Only Change No. 091-25514-00047, issued on December 19, 2007;
- (d) Third Notice-Only Change No. 091-26166-00047, issued on March 25, 2008;
- (e) Fourth Notice-Only Change No. 091-26794-00047, issued on August 14, 2008;
- (f) Fifth Notice-Only Change No. 091-28322-00047, issued on September 2, 2009; and
- (g) Sixth Notice-Only Change No. 091-29110-00047, issued on April 19, 2010.

Due to this application, the source is transitioning from a MSOP to a FESOP.

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.
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005.
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.	

- (a) **Ozone Standards**
 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. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

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

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Background and Description of Permitted Emission Units

The Office of Air Quality (OAQ) has reviewed an application, submitted by Howmet Castings and Services, Inc. (formerly Howmet LaPorte Casting) on February 28, 2012, relating to the construction and operation of new emission units at an existing metal alloy casting plant. In addition, Howmet Castings and Services, Inc. have determined their potential emissions exceed the MSOP thresholds. Therefore, Howmet Castings and Services, Inc. has requested to transition from a MSOP to a FESOP.

The source consists of the following permitted emission units:

- (a) One (1) Wax Pattern Assembly Operation, constructed before 2000, consisting of hand application and dip coating of multiple VOC and HAP containing solvents to wax patterns, uncontrolled, and exhausting to the indoors.
- (b) One (1) Ceramic Mold Operation, with a nominal capacity of 0.66 tons of metal and ceramic molds per hour, consisting of the following:
 - (1) One (1) monoshell latex surface coating booth, identified as Monoshell, constructed in 2001, with a nominal capacity of 15 wax forms per hour, equipped with dry filters to control particulate, exhausting to stack MS1;
 - (2) One (1) dip manufacturing operation, constructed in 2002, with a nominal capacity of 30 bags of Zircon flour per hour (0.75 tons per hour), with particulate controlled by a baghouse rated at 1,500 cfm, exhausting to stack DMBH-1;
 - (3) Twenty-three (23) sanding towers, identified as STUCCO-TWR-7 through STUCCO-TWR-22 and STUCCO-TWR-24 through STUCCO-TWR-30, constructed in 1991, with a combined nominal capacity of 0.66 tons per hour of sand, with particulate controlled by a baghouse with High Efficiency Particulate Air (HEPA) filters, identified as DUST-COLL-MONO-FARR, and exhausting back into the Monoshell Department;
 - (4) One (1) aluminum oxide barrel sander, constructed in 2004, with a nominal capacity of 0.6 tons per year of aluminum oxide, with particulate emissions exhausting back into the Monoshell Department; and
 - (5) One (1) dewax furnace, identified as DEWAX-BIG-BERTHA, constructed in 1991, with a nominal capacity of 0.32 tons per hour of cores, and a nominal rated heat capacity of 5.75MMBtu/hr, equipped with one (1) natural gas-fired afterburner, identified as DEWAX-BIG-BERTHA AFTERBURNER, with a nominal rated heat capacity of 1.2 MMBtu/hr as a control, exhausting to stack DW1A.
- (c) Metal Melting and Auxiliary Operations, with a source wide nominal combined capacity of 0.6 tons per hour of metal, consisting of:
 - (1) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-02, constructed in 1987, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 2P.
 - (2) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-02, constructed in 1994, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 2P1.
 - (3) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-04, constructed in 1988, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 4P.
 - (4) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-05, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 5P.
 - (5) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-06, constructed in 1990, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 6P.
 - (6) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-06, constructed in 1991, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 6P1.

- (7) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-09, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 9P.
 - (8) One (1) Natural Gas-Fired Shell Preheater Oven, identified as PREHEAT-10, constructed before 2000, with a nominal rated heat input of 6.8 MMBtu/hr, and exhausting to stack 10P.
 - (9) One (1) Natural Gas-Fired Shell Preheater Oven, identified as JR PREHEAT-10, constructed in 1988, with a nominal rated heat input of 0.75 MMBtu/hr, and exhausting to stack 10P1.
 - (10) One (1) Electric Induction Ovens, identified as VACUUM-CAST-02, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (11) One (1) Electric Induction Ovens, identified as ROLLOVER-CAST-05, constructed in 1990, uncontrolled, and exhausting to the indoors.
 - (12) One (1) Electric Induction Ovens, identified as VACUUM-CAST-06, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (13) One (1) Electric Induction Ovens, identified as VACUUM-CAST-08, constructed in 1989, uncontrolled, and exhausting to the indoors.
 - (14) One (1) Electric Induction Ovens, identified as VACUUM-CAST-09, constructed before 2000, uncontrolled, and exhausting to the indoors.
 - (15) One (1) Electric Induction Ovens, identified as VACUUM-CAST-10, constructed in 1988, uncontrolled, and exhausting to the indoors.

Under 40 CFR 63, Subpart ZZZZZZ, the six (6) electric induction ovens are considered affected sources.
 - (16) One (1) mold hot topping process, constructed before 2000, with a nominal ferrux usage rate of 250,000 pounds per year, uncontrolled, and exhausting to the indoors.
- (d) Pneumatic Shell Removal, identified as KNOCKOUT-01 and KNOCKOUT-02, constructed in 1988, with a nominal capacity of 0.59 tons per hour each of casting shells, with particulate controlled by a common dust collector, identified as KNOCKOUT DUST COLLECTOR, and exhausting to stack KOBH-1.
 - (e) Acid etching process, constructed before 2000, equipped with a scrubber and demister for particulate control of HCl, exhausting to stack Scrubber 02.
 - (f) Post-Cast Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by a baghouse, identified as Post-Cast, constructed in 2005, exhausting to stack ZK4, and consisting of the following:
 - (1) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders; and
 - (2) Enclosed aluminum oxide blasting cabinets.

- (g) Finishing Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by one (1) baghouse, identified as Carter Day, which was constructed before 2000, and exhausting to stacks ZK1, ZK2, and ZK3 and one (1) baghouse, identified as West Metals, which was constructed in 2008, and exhausting to stack ZK5. The finishing operations consist of the following:
- (1) Enclosed aluminum oxide blasting cabinets;
 - (2) Enclosed aluminum oxide blasting booths utilizing hand held blasting pens;
 - (3) Hand held grinding performed in booths; and
 - (4) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders.
- (h) One (1) natural gas-fired boiler, identified as Superior Boiler #3, constructed in 1957, with a nominal rated heat input of 13.4 MMBtu/hr, exhausting to stack B2.

Insignificant activities consisting of the following:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
- (1) One (1) natural gas-fired hot water heater, constructed in 1989, with a nominal rated heat input of 0.65 MMBtu/hr, exhausting to stack HW01. This is a trivial emission unit;
 - (2) One (1) natural gas-fired boiler, identified as BOILER-EAST, constructed in 1991, with nominal rated heat input of 4.2 MMBtu/hr, exhausting to stacks B3.
 - (3) One (1) natural gas-fired boiler, identified as BOILER-HUMIDITY, constructed in 1991, with nominal rated heat input of 2.3 MMBtu/hr, exhausting to stacks B1.
 - (4) One (1) natural gas-fired boiler, identified as BOILER-DEGREASE, constructed in 1994, with nominal rated heat input of 1.4 MMBtu/hr, exhausting to stacks O4H.
 - (5) Miscellaneous natural gas-fired space heaters totaling a nominal of 0.10 MMBtu/hr heat input. These are trivial emission units.
- (b) Two (2) standby diesel generators, identified as GEN-AUXPWR-01 & GEN-AUXPWR-02, with nominal capacities of 315 hp and 375 hp, respectively. Each generator was manufactured before April 1, 2006 and constructed before June 12, 2006.

These units are considered affected sources under 40 CFR Part 63, Subpart ZZZZ.

- (c) Three (3) potassium hydroxide storage tanks, constructed in 2007, identified as Electric Low Temp 01, Electric Low Temp 02 and Electric Low Temp 03, equipped with a wet scrubber to control particulate in an air stream with a volumetric flow rate of 2,800 acfm and an inlet grain loading of 0.01 gr/acf of particulate, exhausting to stacks T1 and T2, respectively.
- (d) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.
- (e) Pressure washing operations, constructed in 1991 and modified in 2009 and 2010, using hydraulic water to remove residual amounts of metal work pieces in enclosed booths, exhausting

outside of the building.

- (f) Miscellaneous belt grinders, band and wet saws, and drills with particulate matter emissions below 5 pounds per hour.
- (g) Nine (9) tungsten inert gas (TIG) welding stations, constructed before 2000, with a combined nominal capacity of 0.075 pounds of electrode and wire per hour, equipped with dust collectors, and exhausting to the indoors.
- (h) Noncontact cooling tower systems with either of the following:
 - (1) Natural draft cooling towers not regulated under a NESHAP.
 - (2) Forced and induced draft cooling tower systems not regulated under a NESHAP.

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

- (a) Post-Cast Operations, constructed before 2000 and approved for modification in 2012, with a nominal capacity of 0.59 tons per hour of unfinished castings and ceramic shells, with particulate controlled by a baghouse, identified as Post-Cast, constructed in 1995, exhausting to stack ZK4, and consisting of the following:
 - (1) Two (2) belt grinding booths, identified as FARG1 and FARG2; and
 - (2) One (1) cutoff wheel hand grinding booth, identified as Manual-Cutoff-02.

Note: The source has requested that these emission units not be specifically listed in the permit, since the post-cast operations consist of numerous grinding booths. As a result, these emission units will be generically identified as follows:

- (1) Casting cutting performed in booths using several cutoff wheels, machining drill bits, and belt grinders.
- (b) Finishing Operations, 0.59.0 tons per hour of unfinished castings and ceramic shells, with particulate controlled by two (2) baghouses, identified as Carter Day and West Metals, constructed before 2000 and in 2008, respectively, with the Carter Day baghouse exhausting to stacks ZK1, ZK2, and ZK3 and the West Metals baghouse exhausting to stack ZK5, and consisting of the following:
 - (1) One (1) hand grinding booth, identified as COMCO-2.

Note: The source has requested that this emission unit not be specifically listed in the permit, since the finishing operations consist of numerous grinding booths. As a result, this emission unit will be generically identified as follows:

- (1) Hand held grinding performed in booths.

The source has removed the following emission units:

- (a) Plasma Arc Cutter with an integral downdraft filter unit, identified as PLASMA-CUTTER, with a nominal metal cutting rate of 30,910 inches per minute, exhausting to the dock area.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	1,364.0
PM10 ⁽¹⁾	1,364.10
PM2.5	1,364.10
SO ₂	0.54
NO _x	36.25
VOC	13.04
CO	27.11
GHGs as CO ₂ e	37,506

- (1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Nickel	53.89
Chromium	14.02
Hydrofluoric Acid (HF)	9.75
Cobalt	5.97
Hydrochloric Acid (HCl)	1.40
Xylene	0.81
All Other HAPs	0.74
TOTAL HAPs	86.58

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10 and PM2.5 are each greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are each less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the PTE of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a FESOP (326 IAC 2-8), because the source will limit emissions of HAPs to less than the Title V major source threshold levels.
- (c) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.

PTE of the Entire Source After Issuance of the FESOP

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)									
	PM	PM10 ¹	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
Wax Pattern Assembly Operation	0	0	0	0	0	10.49	0	0	0.97	0.81 Xylene
Dip Manufacturing Operation	6.76	6.76	6.76	0	0	0	0	0	0	0
Monoshell Latex Surface Coating Booth	0.12	0.12	0.12	0	0	0.002	0	0	0	0
Sanding Towers ²	13.59	11.27	11.27	0	0	0	0	0	0	0
Aluminum Oxide Barrel Sander	0.01	0.01	0.01	0	0	0.01	0	0	0	0
Dewax Furnace	3.56	3.56	3.56	0	0	0.40	0	0	0	0
Induction Ovens (Process emissions)	2.32	2.32	2.32	0	0	0	0	0	1.86	1.39 Nickel
Hot Topping	0	0	0	0	0	0	0	0	9.75	9.75 HF
Pneumatic Shell Removal ²	25.22	10.69	10.69	0	0	0	0	0	0	0
Acid Etch	0	0	0	0	0	0	0	0	1.40	1.40 HCl
Post-Cast Operations (Post-Cast Baghouse) ^{2,3}	12.61	12.61	12.61	0	0	0	0	0	<10.16	<7.60 Nickel
Finishing Operations (Carter Day Baghouse) ^{2,3}	12.61	12.61	12.61	0	0	0	0	0		
Finishing Operations (West Metals Baghouse) ^{2,3}	12.61	12.61	12.61	0	0	0	0	0		
Natural Gas Combustion	0.59	2.35	2.35	0.19	30.90	1.70	25.96	37,307	0.58	0.56 Hexane
Emergency Generators	0.38	0.38	0.38	0.35	5.35	0.43	1.15	199	0.005	0.001 Form- aldehyde
Potassium Hydroxide Storage Tanks	1.05	1.05	1.05	0	0	0	0	0	0	0
Insignificant Grinding and Machining	0.13	0.06	0.06	0	0	0	0	0	0	0
Welding	0.33	0.33	0.33	0	0	0	0	0	0.28	0.15 Cobalt

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)									
	PM	PM10 ¹	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
Cooling Towers	8.83	7.24	7.24	0	0	0	0	0	0	0
Insignificant Pressure Washing Operations	2.00	2.00	2.00	0	0	0	0	0	0	0
Total PTE of Entire Source	102.71	85.96	85.96	0.54	36.25	13.04	27.11	37,506	<25.0	<10
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA
¹ Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". ² The PM, PM10, and PM2.5 emissions from the sanding towers, pneumatic shell removal, post-cast, carter day, and west metals baghouses have been limited to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permits) not applicable. ³ The Metal HAPs emissions from the post-cast, carter day, and west metals baghouses have been limited to render the requirements of 326 IAC 2-4.1 (Major Sources of HAP) and 326 IAC 2-7 (Part 70 Permits) not applicable.										

(a) FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is limited to less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) The PM10 and PM2.5 emissions from the following units shall not exceed the emission limits listed in the table below:

Unit Description	Baghouse ID	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
Twenty-three (23) Sanding Towers	DUST-COLL-MONO-FARR	2.57	2.57
Pneumatic Shell Removal (KNOCKOUT-01 and KNOCKOUT-02)	KNOCKOUT DUST COLLECTOR	2.44	2.44
Post-Cast Operations	Post-Cast	2.88	2.88
Finishing Operations	Carter Day	2.88	2.88
Finishing Operations	West Metals	2.88	2.88

- (2) The Nickel, Chromium, Cobalt, and Total HAPs emissions from the following units shall be limited to less than the values listed in the table below:

Unit Description	Baghouse ID	Nickel Emission Limit (lbs/hr)	Chromium Emission Limit (lbs/hr)	Cobalt Emission Limit (lbs/hr)	Total HAPs Emission Limit (lbs/hr)
Post-Cast Operations	Post-Cast	1.74	0.42	0.17	2.32
Finishing Operations	Carter Day				
Finishing Operations	West Metals				

Compliance with these limits, combined with the potential to emit PM10, PM2.5, total HAPs, and any single HAP from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, any single HAP to less than ten (10) tons per 12 consecutive month period, total HAPs to less than twenty-five (25) tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

- (b) PSD Minor Source

This existing source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is limited to less than 250 tons per year, the potential to emit all other attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than the PSD subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

- (1) The PM emissions from the following units shall not exceed the emission limits listed in the table below:

Unit Description	Baghouse ID	PM Emission Limit (lbs/hr)
Twenty-three (23) Sanding Towers	DUST-COLL-MONO-FARR	3.10
Pneumatic Shell Removal (KNOCKOUT-01 and KNOCKOUT-02)	KNOCKOUT DUST COLLECTOR	5.76
Post-Cast Operations	Post-Cast	2.88
Finishing Operations	Carter Day	2.88
Finishing Operations	West Metals	2.88

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR Part 60, Subpart Dc (326 IAC 12), are not included in the permit, since the natural gas-fired boiler, identified as Superior Boiler #3 was constructed before June 9, 1989. In addition, the two (2) natural gas-fired boilers, identified as BOILER-HUMIDITY and BOILER-EAST are not subject to the requirements of this NSPS because they each have heat input capacities less than ten (10) MMBtu/hr.

- (b) The requirements of the following New Source Performance Standards (NSPS) are not included in the permit, because the dewax furnace, which was constructed in 1991, is not considered a municipal waste combustor or hospital/medical/infectious waste incinerator:
 - (1) 40 CFR Part 60, Subpart E, Standards of Performance for Incinerators (326 IAC 12).
 - (2) 40 CFR Part 60, Subpart Ea, Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994 (326 IAC 12).
 - (3) 40 CFR Part 60, Subpart Eb, Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996 (326 IAC 12).
 - (4) 40 CFR Part 60, Subpart Ec, Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996 (326 IAC 12).
 - (5) 40 CFR Part 60, Subpart AAAAA, Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001 (326 IAC 12).
 - (6) 40 CFR Part 60, Subpart BBBBB, Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999 (326 IAC 12).
 - (7) 40 CFR Part 60, Subpart CCCC, Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001 (326 IAC 12).

- (c) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR Part 60, Subpart IIII (326 IAC 12), are not included in the permit, since the two (2) diesel-fired emergency generators were each manufactured before April 1, 2006 and constructed before July 11, 2005.

- (d) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) The requirements of the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart EEE (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors) (326 IAC 20-28) are not included in the permit for the dewax furnace because it does not meet the definition of a hazardous waste incinerator and the source is not a major source for HAPs.
- (b) The two (2) standby diesel generators, identified as GEN-AUXPWR-01 & GEN-AUXPWR-02, with nominal capacities of 315 hp and 375 hp, respectively are subject the requirements of the 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because each unit is considered a existing stationary reciprocating internal combustion engine (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP).

The two (2) standby diesel generators, identified as GEN-AUXPWR-01 & GEN-AUXPWR-02 are subject the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006) at an area source of HAP:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii)
- (4) 40 CFR 63.6640(f)
- (5) 40 CFR 63.6670
- (6) 40 CFR 63.6675

This is a new requirement in the permit. There are no applicable testing requirements for the two (2) existing generators in this NESHAP.

Pursuant to 40 CFR 63.6590(b)(3), the two (2) standby diesel generators, identified as GEN-AUXPWR-01 & GEN-AUXPWR-02 do not have to meet the requirements of 40 CRF Part 63, Subpart A (General Provisions), since each unit is considered an existing emergency stationary RICE at an area source of HAP emissions.

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Iron and Steel Foundries, 40 CFR Part 63, Subpart EEEEE (326 IAC 20-92), are not included in the permit, since this metal alloy casting plant is not an iron and steel foundry.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Iron and Steel Foundries Area Sources, 40 CFR Part 63, Subpart ZZZZZ, are not included in the permit, since this metal alloy casting plant is not an iron and steel foundry, as define in 40 CFR 63.10906. This source melts nonferrous metal alloys, which primarily contain nickel, chromium, and cobalt. Pursuant to 40 CFR 63.10906, 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.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR Part 63, Subpart JJJJJ, are not included in the permit for the three (3) existing natural gas-fired boilers, because each unit is a gas-fired boiler, as defined by 40 CFR 63.11237, which is specifically exempted from this rule under 40 CFR 63.11195(e).

- (f) This source is subject to the National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR Part 63, Subpart ZZZZZZ, because this source is a nonferrous foundry that uses materials containing nickel and chromium and is an area source of HAPs. This source is classified as an existing small foundry since the annual metal melt production is greater than 600 tons but less than 6,000 tons.

The units subject to this rule include the following:

- (1) Six (6) Electric Induction Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST -10.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.11544(a), (b), (c), and (f)
(2) 40 CFR 63.11545(a)
(3) 40 CFR 63.11550(a), (c), and (d)
(4) 40 CFR 63.11552(a)
(5) 40 CFR 63.11553
(6) 40 CFR 63.11555
(7) 40 CFR 63.11556
(8) 40 CFR 63.11557
(9) Table 1

This is a new requirement in the permit. There are no applicable testing requirements since this source is classified as a small foundry.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to this nonferrous foundry except as otherwise specified in 40 CFR Part 63, Subpart ZZZZZZ.

- (g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (h) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 1-7 (Stack Height)
Pursuant to 326 IAC 1-7-1, this rule applies to all sources having exhaust gas stacks through which a potential of twenty-five (25) tons per year or more of particulate matter and/or sulfur dioxide are emitted. This source has exhaust gas stacks, which have the potential to emit greater than twenty-five (25) tons per year of particulate matter. Therefore, this source is subject to the requirements of 326 IAC 1-7.

Note: Pursuant to 326 IAC 1-7-5(a), all source having less than twenty-five (25) tons per year of actual emissions (after controls) shall be exempt from the requirements specified in 326 IAC 1-7-3(a).

- (b) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (c) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The unlimited potential to emit of HAPs from the entire source is greater than ten (10) tons per year for any single HAP and/or greater than twenty-five (25) tons per year of a combination of HAPs. However, the source shall limit the potential to emit of HAPs from the entire source to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (e) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1(a)(2), this rule applies to source all source located in Lake, Porter, and LaPorte Counties that emit VOC or NOx into the ambient air at levels equal to or greater than twenty-five (25) tons per year. Since this source is located in LaPorte County, and has the potential to emit greater than or equal to twenty-five (25) tons of NOx per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year when actual NOx emissions are equal to or greater than twenty-five (25) tons per year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.
- Note: If actual NOx emissions are less than twenty-five tons per year the source does not have to submit an emission statement.
- (f) 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 Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) 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.
 - (2) 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.
- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.
- (h) 326 IAC 7-4-5 (LaPorte County Sulfur Dioxide Emission Limitations)
The requirements of 326 IAC 7-4-5 are not applicable to this source because it is not one of the specifically listed sources.

- (i) 326 IAC 11-1 (Existing Foundries)
This rule establishes specific emission limitations for particulate matter from foundries in operation on or before December 6, 1968. Foundries beginning operation after December 6, 1968 are required to comply with the emission limits specified in 326 IAC 6-3. This rule is not applicable to this source since the foundry was not in existence prior to December 6, 1968.

Wax Pattern Assembly Operation

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(b)(5) and (8) the wax pattern assembly operation is exempt from the requirements of 326 IAC 6-3-2 when applying coatings using dip or brush application methods.
- (b) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The wax pattern assembly operation is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions is less than twenty-five (25) tons per year.
- (c) 326 IAC 8-2-1 (Surface Coating Emission Limitations)
The wax pattern assembly operation has potential VOC emissions greater than fifteen (15) pounds per day and but does not perform any of the types of surface coating activities described in sections 2 through 13 of this rule. The wax pattern assembly operation applies various solvents to wax patterns and ceramic cores. Therefore, no requirements of 326 IAC 8-2 are included in this permit.

Ceramic Mold Operation

- (a) 326 IAC 4-2-2 (Incinerators)
The natural gas-fired dewax furnace is used to destroy any wax pattern cluster components trapped inside the ceramic shell assembly. The residual wax pattern cluster components are considered a waste. Therefore, the dewax furnace is subject to the requirements of 326 IAC 4-2-1 because this furnace meets the definition of an incinerator provided in 326 IAC 1-2-34 and is not subject to any of the rules identified in 326 IAC 4-2-1(b)(2).

Pursuant to 326 IAC 4-2, the dewax furnace shall:

- (1) Consist of primary and secondary chambers or the equivalent;
- (2) Be equipped with a primary burner unless burning wood products;
- (3) Comply with 326 IAC 5-1 and 326 IAC 2;
- (4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
- (5) Not emit particulate matter in excess of one (1) of the following:
 - (A) Three-tenths (0.3) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions correct to fifty percent (50%) excess air for incinerators with solid waste capacity of greater than or equal to two hundred (200) pounds per hour.
 - (B) Five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity of less than two hundred (200) pounds per hour.

- (6) If any requirements of 326 IAC 4-2-2(a)(1) through 326 IAC 4-2-2(a)(5) above are not met, the source shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

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

- (1) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the following operations shall not exceed the pounds per hour limit listed in the table below:

Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Dip Manufacturing Operation	0.75	3.38
Sanding Towers	0.66 (total)	3.10

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

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

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

Based on calculations in Appendix A, the dip manufacturing operation baghouse is not needed to comply with this limit. However, since the potential to emit for the dip manufacturing operation was determined using the baghouse specifications, the baghouse shall be in operation at all times the dip manufacturing process is in operation, in order to comply with this limit.

The sanding towers baghouse shall be in operation at all times the sanding towers are in operation, in order to comply with these limits.

- (2) Pursuant to 326 IAC 6-3-1(b)(15) and 326 IAC 6-3-2(d)(4), the monoshell surface coating booth is exempt from 326 IAC 6-3 because it uses less than five (5) gallons of coating per day (see Appendix A for more detailed calculations).
- (3) Pursuant to 326 IAC 6-3-1(b)(14), the aluminum oxide barrel sander is exempt from the requirements of 326 IAC 6-3-2 since the potential particulate emissions are less than 0.551 pounds per hour.
- (4) The natural gas-fired dewax furnace is not subject to the requirements of 326 IAC 6-3 because, pursuant to 326 IAC 6-3-1(b)(2), incinerators are exempt.
- (c) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each emission unit is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each unit is less than twenty-five (25) tons per year.
- (d) 326 IAC 8-2-1 (Surface Coating Emission Limitations)
The monoshell surface coating booth has potential VOC emissions greater than fifteen (15) pounds per day, but does not perform any of the types of surface coating activities described in sections 2 through 13 of this rule. The monoshell surface coating booth is used to spray coat wax forms with latex. Therefore, no requirements of 326 IAC 8-2 are included in this permit.

- (e) 326 IAC 9-1-2 (Carbon Monoxide Emission Limits)
The natural gas-fired powder dewax furnace, which is considered a refuse incineration and refuse burning equipment is subject to 326 IAC 9-1-2 (Carbon Monoxide Emission Limits) because this unit is a stationary source of carbon monoxide constructed after March 21, 1972 and subject to the requirements of 326 IAC 9-1-2(a)(3).

Pursuant to 326 IAC 9-1-2(a)(3) (Carbon Monoxide Emission Limits), the source shall not operate the dewax furnace unless the waste gas stream is burned in one (1) of the following:

- (1) Direct-flame afterburner; or
- (2) Secondary chamber.

Note: The dewax furnace is equipped with an afterburner. Therefore, compliance with 326 IAC 9-1-2(a)(3) is expected.

Metal Melting and Auxiliary Operations

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
- (1) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the electric induction ovens shall not exceed 2.88 pounds per hour when operating at a process weight rate of 0.59 tons per hour.

The pound per hour limitation was calculated with the following equation:

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

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

Based on calculations, a control device is not needed to comply with this limit (see Appendix A).

- (2) The nine (9) natural gas fired shell preheater ovens are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.
 - (3) The mold hot topping process is not subject to 326 IAC 6-3-2 because this process does not have the potential to emit particulate matter.
- (b) There are no 326 IAC 8 Rules that are applicable to the metal melting and auxiliary operations because they do not have a potential to emit VOC.
- (c) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Pneumatic Shell Removal

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the pneumatic shell removal (KNOCKOUT-01 and KNOCKOUT-02) shall not exceed 2.88 pounds per hour when operating at a process weight rate of 0.59 tons per hour, each.

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

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

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

The pneumatic shell removal dust collector shall be in operation at all times the pneumatic shell removal process is in operation, in order to comply with these limits.

Acid Etching Process

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The acid etching process is not subject to the requirements of 326 IAC 6-3-2 because this process does not have a potential to emit particulate.
- (b) There are no 326 IAC 8 Rules that are applicable to the acid etching process because this process does not have the potential to emit VOC.

Post-Cast and Finishing Operations

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the following operations shall not exceed the pounds per hour limit listed in the table below:

Unit Description	Baghouse ID	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Post-Cast Operations	Post-Cast	0.59	2.88
Finishing Operations	Carter Day	0.59	2.88
Finishing Operations	West Metals	0.59	2.88

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

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

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

The post-cast, carter day, and west metals baghouses shall be in operation at all times the post-cast and finishing operations are in operation, in order to comply with these limits.

Natural Gas Combustion and Diesel Generators

(a) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

- (1) The one (1) natural gas-fired boiler, identified as Superior Boiler #3, which was constructed in 1957, is subject to 326 IAC 6-2 because it was constructed prior to September 21, 1983 and is a source of indirect heating. Pursuant to 326 IAC 6-2-3(b), particulate emissions from this boiler must be calculated using the following equation:

$$P_t = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

C = maximum ground level concentration with respect to distance from the point source at "critical" wind speed for level terrain (50)

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source operating capacity (13.4 MMBtu/hr)

N = number of stacks in fuel burning operation (1)

a = 0.67 rise factor

h = stack height (1 stack 38.5 feet high)

$$P_t = \frac{50 \times 0.67 \times 38.5}{76.5 \times (13.4)^{0.75} \times (1)^{0.25}}$$

$$P_t = 2.41 \text{ lb/MMBtu}$$

Pursuant to 326 IAC 6-2-3(d), particulate emissions from all facilities used for indirect heating purposes, which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.8 lb/MMBtu heat input. Based on the calculations below, Superior Boiler #3 can comply with this limit.

When burning natural gas:

$$\text{PM Emissions} = 1.9 \text{ lb PM/MMSCF} \times \text{MMSCF}/1,020 \text{ MMBtu} = 0.0019 \text{ lbs/MMBtu}$$

- (2) The one (1) natural gas-fired hot water heater, which was constructed in 1989, is subject to 326 IAC 6-2-4 because it was constructed after September 21, 1983 and is a source of indirect heating. Pursuant to 326 IAC 6-2-4(a), particulate emissions from this heater must be calculated using the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source operating capacity (19.9 + 0.65 = 20.55 MMBtu/hr)

$$P_t = \frac{1.09}{20.55^{0.26}}$$

$$P_t = 0.497 \text{ lb/MMBtu}$$

Based on the calculations below, the hot water heater can comply with this limit.

When burning natural gas:

$$\text{PM Emissions} = 1.9 \text{ lb PM/MMSCF} \times \text{MMSCF}/1,020 \text{ MMBtu} = 0.0019 \text{ lbs/MMBtu}$$

- (3) The two (2) natural gas-fired boilers, identified as BOILER-HUMIDITY and BOILER-EAST, which were constructed in 1991, are subject to 326 IAC 6-2-4 because they were constructed after September 21, 1983 and are a source of indirect heating. Pursuant to 326 IAC 6-2-4(a), particulate emissions from these boilers must be calculated using the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
 Q = total source operating capacity (20.55 + 2.30 + 4.20 = 27.05 MMBtu/hr)

$$P_t = \frac{1.09}{27.05^{0.26}}$$

P_t = 0.462 lb/MMBtu, each

Based on the calculations below, these boilers can comply with this limit.

When burning natural gas:

PM Emissions = 1.9 lb PM/MMSCF * MMSCF/1,020 MMBtu = 0.0019 lbs/MMBtu, each

- (4) The one (1) natural gas-fired boiler, identified as BOILER-DEGREASE, which was constructed in 1994, is subject to 326 IAC 6-2-4 because it was constructed after September 21, 1983 and is a source of indirect heating. Pursuant to 326 IAC 6-2-4(a), particulate emissions from this boiler must be calculated using the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
 Q = total source operating capacity (27.05 + 1.40 = 28.45 MMBtu/hr)

$$P_t = \frac{1.09}{28.45^{0.26}}$$

P_t = 0.456 lb/MMBtu

Based on the calculations below, this boiler can comply with this limit.

When burning natural gas:

PM Emissions = 1.9 lb PM/MMSCF * MMSCF/1,020 MMBtu = 0.0019 lbs/MMBtu

- (5) The miscellaneous natural gas-fired space heaters and diesel-fired generators are not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, these emission units do not meet the definition of an indirect heating unit.

- (b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
 The natural gas-fired combustion units and diesel fired generators are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.
- (c) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
 This source is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit sulfur dioxide from each natural gas-fired combustion unit and diesel fired generator is less than twenty-five (25) tons per year and ten (10) pounds per hour.
- (d) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
 The natural gas-fired combustion units and diesel fired generators are not subject to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), because they each have the potential to emit VOC of less than twenty-five (25) tons per year.
- (e) 326 IAC 9-1-1 (Carbon Monoxide Emission Limits)
 The natural gas-fired combustion units and diesel fired generators are not subject to 326 IAC 9-1-1 (Carbon Monoxide Emission Limits) because there is no applicable emission limits for the source under 326 IAC 9-1-2.
- (f) 326 IAC 10-1-1 (Nitrogen Oxides Control)
 The natural gas-fired combustion units and diesel fired generators are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because the source is not located in Clark or Floyd counties.

Potassium Hydroxide Storage Tanks

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-1(b)(14), the potassium hydroxide storage tanks (Low Temp Chemical Shell Removal) are not subject to the requirements of 326 IAC 6-3-2 because the potential particulate matter emissions are less than 0.551 pounds per hour.
- (b) There are no 326 IAC 8 Rules that are applicable to the potassium hydroxide storage tanks because potassium hydroxide is not a VOC.

Insignificant Grinding, Machining, Pressure Washing Operations, and Welding

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-1(b)(14), the insignificant grinding, machining, pressure washing operations, and welding are not subject to the requirements of 326 IAC 6-3-2 because the potential particulate matter emissions from each process is less than 0.551 pounds per hour.

Compliance Determination, Monitoring and Testing Requirements
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- (a) The compliance determination and monitoring requirements applicable to this source are as follows:

Emission Unit/Control	Operating Parameters	Frequency
Sanding Towers/DUST-COLL-MONO-FARR	Pressure Drop	Once per day
Pneumatic Shell Removal/KNOCKOUT DUST COLLECTOR	Pressure Drop	Once per day
Post-Cast Operations/Post-Cast Baghouse	Pressure Drop	Once per day
Finishing Operations/Carter Day Baghouse	Pressure Drop	Once per day
Finishing Operations/West Metals Baghouse	Pressure Drop	Once per day

(b) The testing requirements applicable to this source are as follows:

Testing Requirements				
Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Sanding Towers	DUST-COLL-MONO-FARR	PM, PM10, and PM2.5	No later than 180 days after issuance of this permit	Once every five (5) years
Pneumatic Shell Removal (KNOCKOUT-01 and KNOCKOUT-02)	KNOCKOUT DUST COLLECTOR	PM, PM10, and PM2.5	No later than 180 days after issuance of this permit	Once every five (5) years
Post-Cast Operations	Post-Cast Baghouse	PM, PM10, PM2.5, Nickel, Chromium, and Cobalt	No later than 180 days after issuance of this permit	Once every five (5) years
Finishing Operations	Carter Day Baghouse	PM, PM10, PM2.5, Nickel, Chromium, and Cobalt	No later than 180 days after issuance of this permit	Once every five (5) years
Finishing Operations	West Metals Baghouse	PM, PM10, PM2.5, Nickel, Chromium, and Cobalt	No later than 180 days after issuance of this permit	Once every five (5) years

The source is required to perform particulate testing of the sanding towers operation because the baghouse must achieve a high control efficiency in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permits) not applicable and to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

The source is required to perform particulate testing of the pneumatic shell removal dust collector when both pneumatic shell removal processes (KNOCKOUT-01 and KNOCKOUT-02) are in operation because the dust collector must achieve a high control efficiency in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permits) not applicable and to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). IDEM is aware the source performed outlet (after control) stack testing while one of the pneumatic shell removal processes was in operation on July 23, 2003. The results of this stack test were approved by IDEM. However, since the source is transitioning to a FESOP and the dust collector controls two processes, the source must test the outlet while both processes are operating to ensure the dust collector can adequately handle the additional emissions from the second pneumatic shell removal process.

The source is also required to perform particulate and metal HAP testing of the post-cast, carter day, and west metals baghouse because each baghouse must achieve a high control efficiency in order to render the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)), and 326 IAC 2-7 (Part 70 Permits) not applicable and to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Conclusion and Recommendation

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 February 28, 2012. Additional information was received on April 10, 17, 20, and 24, 2012.

The operation of this source shall be subject to the conditions of the attached proposed New Source Review and FESOP No. 091-31556-00047. The staff recommends to the Commissioner that this (New Source Review and FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

**Appendix A: Emissions Calculations
VOC and HAPs**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

Wax Pattern Assembly Operation

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Maximum Usage (gal/hr)	lb VOC/gallon of coating less water	lb VOC/gallon of coating	Potential VOC (lb/hr)	Potential VOC (lb/day)	VOC Potential (ton/yr)	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Xylene	7.25	100.00%	0.0%	100.0%	0.0%	0.00%	0.024	7.25	7.25	0.17	4.17	0.76	0.00	N/A	100%
Wax Blue Seal	7.77	67.00%	0.0%	67.0%	0.0%	0.00%	0.01	5.21	5.21	0.04	1.07	0.20	0.00	N/A	100%
Mineral Spirits	6.32	100.00%	0.0%	100.0%	0.0%	0.00%	0.01	6.32	6.32	0.09	2.05	0.37	0.00	N/A	100%
Silquest A 1100	7.92	99.8%	0.0%	99.8%	0.0%	0.00%	0.01	7.90	7.90	0.11	2.70	0.49	0.00	N/A	100%
Nature Sol	7.19	91.95%	0.0%	92.0%	0.0%	0.00%	0.02	6.61	6.61	0.13	3.04	0.55	0.00	N/A	100%
Safety Kleen Solvent	6.70	100.00%	0.0%	100.0%	0.0%	0.00%	0.26	6.70	6.70	1.77	42.42	7.74	0.00	N/A	100%
Shellac	7.42	71.20%	0.0%	71.2%	0.0%	0.00%	0.002	5.28	5.28	0.01	0.31	0.06	0.00	N/A	100%
Denatured	6.78	100.00%	0.0%	100.0%	0.0%	0.00%	0.011	6.78	6.78	0.07	1.72	0.31	0.00	N/A	100%

Total Potential Emissions**0.36****2.39****57.48****10.49****Methodology:**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Maximum (gal/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Maximum (gal/hr) * (24hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Maximum (gal/hr) * (8760 hr/yr) * (1 ton/2000lbs)

Particulate Potential Tons per Year = (gal/hr) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Material	Density (Lb/Gal)	Maximum (gal/hr)	Weight % Methanol	Weight % Xylene	Weight % Ethyl Benzene	Weight % MIBK	Potential Methanol (ton/yr)	Potential Xylene (ton/yr)	Potential Ethyl Benzene (ton/yr)	Potential MIBK (ton/yr)	Total HAPs (ton/yr)
Xylene	7.25	0.024	0.0%	80.0%	20.0%	0.0%	0.00	0.61	0.15	0.00	0.76
Wax Blue Seal	7.77	0.01	0.0%	67.0%	0.0%	0.0%	0.00	0.20	0.00	0.00	0.20
Mineral Spirits	6.32	0.01	0.0%	1.0%	0.0%	0.0%	0.00	0.00	0.00	0.00	0.00
Silquest A 1100	7.92	0.01	0.0%	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00	0.00
Nature Sol	7.19	0.02	0.0%	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00	0.00
Safety Kleen Solvent	6.70	0.26	0.0%	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00	0.00
Shellac	7.42	0.002	0.0%	0.0%	0.0%	1.0%	0.00	0.00	0.00	0.001	0.00
Alcohol	6.78	0.01	3.6%	0.0%	0.0%	1.9%	0.01	0.00	0.00	0.01	0.01

0.36**Total Potential Emissions****0.01****0.81****0.15****0.007****0.97****Methodology:**

MIBK = Methyl Isobutyl Ketone

Potential HAPs Tons per Year = Density (lb/gal) * Gal of Material (gal/hr) * Weight % HAP * (8760 hr/yr) * (1 ton/2000lbs)

**Appendix A: Emissions Calculations
VOC and Particulate**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Monoshell Spraybooth

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	lb VOC/ gallon of coating less water	lb VOC/ gallon of coating	Potential VOC (lb/hr)	Potential VOC (lb/day)	VOC Potential (ton/yr)	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Reichhold Synthemul 97982-01	8.5	67.00%	66.4%	0.6%	68.1%	33.00%	0.00063	15.0	0.16	0.05	0.0005	0.01	0.002	0.12	0.16	0%

Methodology:

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) * (1 ton/2000lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

**Appendix A: Emissions Calculations
Particulate and VOC Emissions from
Ceramic Mold Operation**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

One (1) Dip Manufacturing Operation

Grain Loading per Actual Cubic Foot of Outlet Air (gr/acfm)	Air Flow Rate (acfm)	Control Efficiency (%)	Uncontrolled PM Emissions (tons/yr)	Controlled PM Emissions (tons/yr)
0.0012	1500	99.00%	6.76	0.0676

Methodology

Potential (uncontrolled) = Loading (grains/acfm) * Air Flow Rate (acfm) * 1 lb/7,000 grains * 60 min/hr * 8,760 hr/yr * 1 ton/2,000 lbs * 1/(1-control efficiency)
 Potential (controlled) = Outlet Loading (grains/acfm) * Air Flow Rate (acfm) * 1 lb/7,000 grains * 60 min/hr * 8,760 hr/yr * 1 ton/2,000 lbs
 Assumes PM10 and PM2.5 = PM

Twenty-two (22) Sanding Towers - Monoshell Sand Baghouse

Total Sanding Tower Sand Consumption (lbs/hr)*	Total Material Collected (lbs/hr)*	Uncontrolled PM Emissions (lbs/hr)	Uncontrolled PM Emissions (tons/yr)	Control Efficiency (%)	Controlled PM Emissions (lbs/hr)	Controlled PM Emissions (tons/yr)	Limited PM Emissions (lbs/hr)**	Limited PM Emissions (tons/yr)**	Limited PM10/PM2.5 Emissions (lbs/hr)	Limited PM10/PM2.5 Emissions (tons/yr)
343.59	25.71	25.72	112.66	99.97%	0.008	0.034	3.10	13.59	2.57	11.27

Methodology

*Total sanding tower sand consumption and total material collected were provided by the source and based on mass balance loading estimates.
 Total Sanding Tower Sand Consumption (lbs/hr) = 3,009,834 (lbs/yr) / 8,760 (hrs/yr)
 Total Material Collected (lbs/hr) = 225,243 (lbs/yr) / 8,760 (hrs/yr)
 Uncontrolled PM Emissions (lbs/hr) = Total Material Collected (lbs/hr) / Control Efficiency (%)
 Uncontrolled PM Emissions (tons/yr) = Uncontrolled PM Emissions (lbs/hr) * 8,760 (hrs/yr) x 1/2,000 (ton/lbs)
 Controlled PM Emissions (lbs/hr) = Uncontrolled PM Emissions (lbs/hr) x (1 - Control Efficiency (%))
 Controlled PM Emissions (tons/yr) = Controlled PM Emissions (lbs/hr) * 8,760 (hrs/yr) x 1/2,000 (ton/lbs)
 Assumes PM10 and PM2.5 = PM
 **Limited PM Emissions equal to allowable PM emissions pursuant to 326 IAC 6-3-2.
 Limited PM Emissions (lbs/hr) = 4.1 x 0.66^0.67
 Limited PM Emissions (tons/yr) = Limited Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lbs)
 Limited PM10/PM2.5 Emissions (lbs/hr) = Uncontrolled PM Emissions (lbs/hr) x (1 - 90% Control Efficiency)
 Limited PM10/PM2.5 Emissions (tons/yr) = Limited PM10/PM2.5 Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lbs)

**Appendix A: Emissions Calculations
Particulate and VOC Emissions from
Ceramic Mold Operation**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

One (1) Aluminum Oxide Barrel Sander

Strands Consumption Rate (lbs/yr)	Silica Content (%)	VOC Content (%)	Particulate (ton/yr)	VOC (ton/yr)
1,200.0	0.98%	2.00%	0.01	0.01

Methodology

PM emissions (tons/year) = strands consumption rate (lbs/yr) * silica content (%) * 1/2000 (lbs/ton)
VOC emissions (tons/year) = strands consumption rate (lbs/yr) * VOC content (%) * 1/2000 (lbs/ton)

One (1) Dewax Furnace

Maximum Capacity (tons of cores/hr)	PM Emission Factor (lb PM/ton of core)*	Uncontrolled PM Emissions (tons/yr)	VOC Emission Factor (lb VOC/ton of core)*	Uncontrolled VOC Emissions (tons/yr)
0.32	2.54	3.56	0.29	0.40

Methodology

The following calculations for the wax burn out oven were submitted by the source:

*Although an AP-42 emission factor is not available, burning the wax and polystyrene core components from the ceramic shells could be compared to burning a heavy petroleum residual oil, such as #5 residual oil. Wax is a residual petroleum product.

An estimated emission factor for removing the core materials could be derived by converting the emission factor for #5 residual oil from a pounds PM/VOC per 1,000 gallons basis to a pounds PM/VOC per ton basis. The following calculation demonstrates this:

$(10 \text{ lbs PM}/1000 \text{ gallons oil}) * (1 \text{ gallon oil}/7.88 \text{ lbs oil}) * (2000 \text{ lbs}/\text{ton}) = 2.54 \text{ lbs PM}/\text{ton of cores}$

$(1.13 \text{ lbs VOC}/1,000 \text{ gallons oil}) * (1 \text{ gallon oil}/7.88 \text{ lbs oil}) * (2,000 \text{ lbs}/\text{ton}) = 0.29 \text{ lbs VOC}/\text{ton of cores}$

Potential Uncontrolled = Maximum Capacity (tons of cores/hr) * PM EF (lb PM/ton of core) * 8,760 (hrs/yr) * 1/2,000 (ton/lbs)

**Appendix A: Emissions Calculations
Induction Ovens (Process Emissions)**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

Six (6) Electric Induction Ovens (SCC 30400303)

Maximum Capacity (tons of steel/hr)	PM Emission Factor (lb PM/ton of steel)*	Unlimited PM Emissions (tons/yr)	Unlimited Chromium Emissions (tons/yr)	Unlimited Nickel Emissions (tons/yr)	Unlimited Cobalt Emissions (tons/yr)	Total Metal HAP Emissions (tons/yr)
0.59	0.9	2.32	0.33	1.39	0.13	1.86

Alloy Composition

Percent Chromium (%)**	Percent Nickel (%)**	Percent Cobalt (%)**
14.40%	60.10%	5.80%

Methodology:

*The PM emission factor is based on the SCC and can be found in FIRE (Factor Information Retrieval)

**Percent metal provided by source.

Unlimited PM Emissions (tons/yr) = Maximum Capacity (tons of steel/hr) * EF (lb/ton of steel) * 8,760 (hrs/yr) * 1/2,000 (ton/lbs)

Unlimited Metal HAPs Emissions (tons/yr) = Unlimited PM Emissions (tons/yr) * Metal HAP (%)

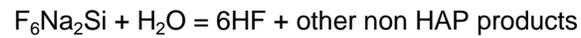
**Appendix A: Emissions Calculations
Hot Topping Emissions**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Hot Topping	Ferrux Usage (lb/yr)	Concentration of F ₆ Na ₂ Si in Ferrux (%)	Hydrogen Fluoride Emission Factor (lb HF/ lb F ₆ Na ₂ Si)	HF Emissions (ton/yr)
	305,500.00	10%	0.6383	9.75

Methodology:

Emissions factor for HF generated from F₆Na₂Si based on material balance and assumes 100% conversion.



$6HF / F_6Na_2Si = 6(20.0063)/(188.05594) = 0.6383$

$HF \text{ Emissions (ton/yr)} = Ferrux \text{ Usage (lb/yr)} \times Concentration (\%) \times HF \text{ Emission Factor (lb/lb)} \times 1/2,000 \text{ (ton/lbs)}$

**Appendix A: Emissions Calculations
Particulate Emissions
Pneumatic Shell Removal**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Pneumatic Shell Removal - Knockout-01 and Knockout-02

Total Monoshell Material Usage (lbs/hr)*	Total Material Collected (lbs/hr)*	Uncontrolled PM Emissions (lbs/hr)**	Uncontrolled PM Emissions (tons/yr)**	Control Efficiency (%)	Controlled PM Emissions (lbs/hr)***	Controlled PM Emissions (tons/yr)	Controlled PM10 Emissions (lbs/hr)***	Controlled PM10 Emissions (tons/yr)	Limited PM Emissions (lbs/hr)****	Limited PM Emissions (tons/yr)****	Limited PM10/PM2.5 Emissions (lbs/hr)	Limited PM10/PM2.5 Emissions (tons/yr)
316.41	48.34	48.83	213.87	99.00%	0.240	1.051	0.474	2.076	5.76	25.22	2.44	10.69

Methodology

*Total monoshell material usage and total material collected were provided by the source and based on mass balance loading estimates in order to estimate the potential uncontrolled emissions.

Total Monoshell Material Usage (lbs/hr) = 2,771,766 (lbs/yr) / 8,760 (hrs/yr)

Total Material Collected (lbs/hr) = 423,456 (lbs/yr) / 8,760 (hrs/yr)

Uncontrolled PM Emissions (lbs/hr) = Total Material Collected (lbs/hr) / Control Efficiency (%)

Uncontrolled PM Emissions (tons/yr) = Uncontrolled PM Emissions (lbs/hr) * 8,760 (hrs/yr) x 1/2,000 (ton/lbs)

**Assumes PM10 and PM2.5 = PM

***One of the two pneumatic shell removal processes was stack tested on July 23, 2003. The stack testing measured outlet (after control) emissions, and that number is used for the controlled emissions. The results of this stack test has been approved by

Controlled PM/PM10 Emissions (lbs/hr) = Controlled PM/PM10 Emission Factor (lbs/hr) x 2 (Total Number of Knockout Processes)

Controlled PM/PM10 Emissions (tons/yr) = Controlled PM/PM10 Emissions (lbs/hr) * 8,760 (hrs/yr) x 1/2,000 (ton/lbs)

****Limited PM Emissions equal to allowable PM emissions pursuant to 326 IAC 6-3-2.

Limited PM Emissions (lbs/hr) = 4.1 x 0.59^{0.67} x 2 Knockout Processes

Limited PM Emissions (tons/yr) = Limited Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lbs)

Limited PM10/PM2.5 Emissions (lbs/hr) = Uncontrolled PM Emissions (lbs/hr) x (1 - 95% Control Efficiency)

Limited PM10/PM2.5 Emissions (tons/yr) = Limited PM10/PM2.5 Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lbs)

**Appendix A: Emissions Calculations
Acid Etch Emissions**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

*Acid Etch	Vapor Press. (psia)	Tank Area (ft ²)	Gas-Mass Transfer Coefficient for HCl (ft/sec)	Temperature (°R)	HCl Emissions (tons/yr)
Tank 1	0.042	6.25	0.00346	560	0.0869
Tank 2	0.042	6.25	0.00346	560	0.0869
Tank 3	0.588	6.25	0.00346	560	1.2172
Tank 4	0.003	4.17	0.00346	530	0.0044
Tank 5	0.003	4.00	0.00346	530	0.0042
Total HCl Emissions =					1.40

Methodology:

Gas Constant = 10.73 psia ft³/°R lb-mole

Molecular weight of HCl = 36.461 lb/lb-mole

HCl emissions (tons/yr) = $M \text{ (lb/lbmole)} * A \text{ (ft}^2\text{)} * P \text{ (psia)} * K \text{ (ft/sec)} * 3600 \text{ (sec/hr)} * 8760 \text{ (hrs/yr)} / R \text{ (psia ft}^3\text{/}^\circ\text{R lbmole)} * T1 \text{ (}^\circ\text{R)} * 2000 \text{ (lbs/ton)}$

Where: M = molecular weight of compound K = gas-mass transfer coefficient R = gas constant
A = area of tank P = vapor pressure of compound in solution T1 = absolute temperature of solution

**Appendix A: Emissions Calculations
Unlimited and Limited Particulate and HAPs Emissions
from Post-Cast and Finishing Operation Baghouses**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

Unlimited and Limited Particulate Matter Emissions

Process	Control Device	Total Dust Collected (tons/yr)*	Control Efficiency (%)	Uncontrolled PM/PM10/PM2.5 Emissions (lbs/hr)**	Uncontrolled PM/PM10/PM2.5 Emissions (tons/yr)**	Controlled PM/PM10/PM2.5 Emissions (lbs/hr)**	Controlled PM/PM10/PM2.5 Emissions (tons/yr)**	Limited PM/PM10/PM2.5 Emissions (lbs/hr)***	Limited PM/PM10/PM2.5 Emissions (tons/yr)
Post-Cast	Post-Cast Baghouse	231.77	99.00%	53.45	234.11	0.53	2.34	2.88	12.61
Finishing	Carter Day Baghouse	357.03	95.00%	85.80	375.82	4.29	18.79	2.88	12.61
Finishing	West Metals Baghouse	397.46	99.00%	91.66	401.48	0.92	4.01	2.88	12.61
Total		986.26			1,011.41		25.15		37.83

Unlimited Metal HAPs Emissions

Process	Control Device	Percent Chromium (%)*	Percent Nickel (%)*	Percent Cobalt (%)*	Uncontrolled Chromium Emissions (tons/yr)	Uncontrolled Nickel Emissions (tons/yr)	Uncontrolled Cobalt Emissions (tons/yr)	Uncontrolled Total Metal HAPs Emissions (tons/yr)	Controlled Chromium Emissions (tons/yr)	Controlled Nickel Emissions (tons/yr)	Controlled Cobalt Emissions (tons/yr)	Controlled Total Metal HAPs Emissions (tons/yr)
Post-Cast	Post-Cast Baghouse	5.58%	21.21%	2.31%	13.06	49.66	5.41	68.13	0.13	0.50	0.05	0.68
Finishing	Carter Day Baghouse	0.09%	0.50%	0.05%	0.34	1.88	0.19	2.41	0.017	0.094	0.009	0.12
Finishing	West Metals Baghouse	0.05%	0.23%	0.02%	0.20	0.92	0.08	1.20	0.002	0.009	0.001	0.012
					13.60	52.46	5.68	71.74	0.15	0.60	0.06	0.81

Methodology

*Total dust collected and percent metal provided by source
 **Assumes PM10 and PM2.5 equal to PM
 ***Limited PM/PM10/PM2.5 Emissions equal to allowable PM emissions pursuant to 326 IAC 6-3-2.
 Uncontrolled Emissions (lbs/hr) = Total Dust Collected (tons/yr) / Control Efficiency (%) / 8,760 (hrs/yr) x 2,000 (lbs/ton)
 Uncontrolled Emissions (tons/yr) = Uncontrolled Emissions (lbs/hr) x (1 - Control Efficiency %) x 8,760 (hrs/yr) x 1/2,000 (ton/lb)
 Controlled Emissions (lbs/hr) = Uncontrolled Emissions (lbs/hr) x (1 - Control Efficiency %)
 Controlled Emissions (tons/yr) = Controlled Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lb)
 Limited Emissions (lbs/hr) = 4.1 x 0.59^0.67
 Limited Emissions (tons/yr) = Limited Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lb)
 Uncontrolled Metal HAPs Emissions (tons/yr) = Unlimited Emissions (tons/yr) x Percent Metal HAP (%)
 Controlled Metal HAPs Emissions (tons/yr) = Uncontrolled Metal HAPs Emissions (tons/yr) x (1 - Control Efficiency %)

Limited Metal HAPs Emissions

Process	Control Device	Limited Chromium Emissions (lbs/hr)	Limited Chromium Emissions (tons/yr)	Limited Nickel Emissions (lbs/hr)	Limited Nickel Emissions (tons/yr)	Limited Cobalt Emissions (lbs/hr)	Limited Cobalt Emissions (tons/yr)	Limited Total Metal HAPs Emissions (lbs/hr)	Limited Total Metal HAPs Emissions (tons/yr)
Post-Cast and Finishing	Post-Cast, Carter Day, and West Metals	0.42	1.82	1.74	7.60	0.17	0.73	2.32	10.16

Methodology

Limited Emissions (lbs/hr) = (25.0 - 10.16 (total HAPs PTE for all other emission units at the source/yr)) x 1/8,760 (yr/hrs) x 1/2,000 (ton/lbs) x (Individual HAP Content (%) / Total HAP Content of Alloy (%))
 Limited Emissions (tons/yr) = Limited Emissions (lbs/hr) x 8,760 (hrs/yr) x 1/2,000 (ton/lb)

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

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Unit Description	Heat Input (MMBtu)	Unit Description	Heat Input (MMBtu)
DEWAX-BIG-BERTHA	4.20	Boiler- Degrease	1.40
DEWAX afterburners	1.55	Hot Water Heater	0.65
9 Shell Preheater Ovens	42.75	Space Heaters	0.10
Boiler- Humidity	2.30	Superior Boiler #3	13.40
Boiler- East	4.20		

Heat Input Capacity	Potential Throughput
70.55 MMBtu/hr	618.0 MMCF/yr

Pollutant	PM**	PM10**	direct PM2.5*	SO2	NOx***	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.59	2.35	2.35	0.19	30.90	1.70	25.96

**PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are filterable and condensable PM10 and PM2.5 combined, respectively.

***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
Potential Emission in tons/yr	0.00065	0.00037	0.02318	0.55622	0.00105

HAPs- Metals	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	0.00015	0.00034	0.00043	0.00012	0.00065

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

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

Total HAPs tons/yr:	0.58
Worst case single HAP tons/yr (Hexane):	0.56

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	37,081	0.7	0.7
Summed Potential Emissions in tons/yr	37,082		
CO2e Total in tons/yr	37,307		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations
 Reciprocating Internal Combustion Engines - Diesel Fuel
 Output Rating (<=600 HP)
 Maximum Input Rate (<=4.2 MMBtu/hr)**

**Company Name: Howmet Castings and Services, Inc.
 Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
 Permit Number: 091-31556-00047
 Reviewer: Brian Williams**

Output Horsepower Rating (hp)	690.0	Unit Description	HP
Maximum Hours Operated per Year	500	GEN-AUXPWR-01	315
Potential Throughput (hp-hr/yr)	345,000	GEN-AUXPWR-02	375

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.38	0.38	0.38	0.35	5.35	0.43	1.15

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	1.13E-03	4.94E-04	3.44E-04	4.72E-05	1.42E-03	9.26E-04	1.12E-04	2.03E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	4.68E-03
Potential Emission of Highest Single HAP (tons/yr)	1.42E-03

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	198.38	7.99E-03	1.60E-03

Summed Potential Emissions in tons/yr	198.38
CO2e Total in tons/yr	199.04

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
 CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) +
 N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations
Particulate Emissions from
Potassium Hydroxide Storage Tanks**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Low Temp Chemical Shell Removal

Grain Loading per Actual Cubic Foot of Inlet Air (gr/acfm)	Air Flow Rate (acfm)	Uncontrolled PM Emissions (tons/yr)
0.01	2800	1.05

Methodology

Potential (uncontrolled) = Loading (grains/acfm) * Air Flow Rate (acfm) * 1 lb/7,000 grains * 60 min/hr * 8,760 hr/yr * 1 ton/2,000 lbs

**Appendix A: Emissions Calculations
Particulate Emissions from
Grinding/Finishing Operations**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

Grinding Booths

Maximum Capacity (tons of steel/hr)	PM Emission Factor (lb PM/ton of steel)*	PM10 Emission Factor (lb PM10/ton of steel)*	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM10 Emissions (tons/yr)
3.0	0.01	0.0045	0.13	0.06

Methodology

*The emission factors above are from FIRE (Factor Information Retrieval), SCC 30400360.

Potential (uncontrolled) = Maximum Capacity (tons of steel/hr) * EF (lb/ton of steel) * 8,760 (hrs/yr) * 1/2,000 (ton/lbs)

**Appendix A: Emissions Calculations
Welding Emissions**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)	
			PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr		
WELDING														
Tungsten Inert Gas (TIG)(Turbaloy 31 Wire)	9	7.84E-03	1.0	0.01	0.12	0.50	0.27	0.071	0.001	0.008	0.035	0.019	0.063	
Tungsten Inert Gas (TIG)(Tungsten Electrode)	9	4.90E-04	1.0	0.00	0.00	0.00	0.00	0.004	0.000	0.000	0.000	0.000	0.000	
EMISSION TOTALS														
Potential Emissions lbs/hr								0.075	0.001	0.008	0.035	0.019	0.06	
Potential Emissions lbs/day								1.80	0.02	0.19	0.85	0.45	1.51	
Potential Emissions tons/year								0.33	0.003	0.04	0.15	0.08	0.28	

Methodology:

*Emission Factors were provided by the source.

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

**Appendix A: Emissions Calculations
Particulate Emissions from
Cooling Towers**

**Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams**

Process	Evapco Towers	Main Cooling	Roof Cooling	Roof Cooling
Density of Water (lb/gal)	8.34	8.34	8.34	8.34
Recirculation Flow Rate (gal/min)	3,200	2,000	10,000	10,000
Cooling Tower Drift (% of recirculation rate)	0.005%	0.005%	0.005%	0.005%
Cooling Tower Drift (gal/day)	230	144	720	720
Cooling Tower Drift (lbs/day)	1,922	1,201	6,005	6,005
Cooling Tower Drift (million lbs/day)	0.0019	0.0012	0.0060	0.0060
Recirculating Water Conductivity (micro-mho)	1,500	2,600	2,600	2,600
Conductivity to TDS Ratio	65%	65%	65%	65%
Total Dissolved Solids (mg/l)	975	1690	1690	1690
Cooling Tower Cycles of Concentration	2.00	2.00	2.00	2.00
PM Drift Emissions Rate (lbs/hr)	0.16	0.17	0.85	0.85
PM Drift Emissions Rate (tons/yr)	0.68	0.74	3.70	3.70
Percentage of PM-10 in PM emissions	82%	82%	82%	82%
PM-10 Drift Emissions Rate (lbs/hr)*	0.13	0.14	0.69	0.69
PM-10 Drift Emissions Rate (tons/yr)*	0.56	0.61	3.04	3.04

Total PM Emissions (tons/yr) =	8.83
Total PM-10 Emissions (tons/yr)* =	7.24

Methodology

The cooling tower calculations were provided by the source and have been verified by IDEM.

Cooling Tower Drift (gal/day) = Recirculation Flow Rate (gal/min) x Cooling Tower Drift (% of recirculation rate) x 60 (min./hr) x 24 (hr/day)

Cooling Tower Drift (lbs/day) = Cooling Tower Drift (gal/day) x Density of Water (lb/gal)

Cooling Tower Drift (million lbs/day) = Cooling Tower Drift (lbs/day) x 10⁻⁶

Total Dissolved Solids (mg/l) = Recirculating Water Conductivity (micro-mho) x Conductivity to TDS Ratio (%)

PM Drift Emissions Rate (lbs/hr) = Cooling Tower Cycles of Concentration x Cooling Tower Drift (million lbs/day) x Total Dissolved Solids (mg/l) / 24 (hrs/

PM Drift Emissions Rate (tons/yr) = PM Drift Emissions Rate (lbs/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

PM-10 Drift Emissions Rate (lbs/hr) = PM Drift Emissions Rate (lbs/hr) x PM-10 in PM Emissions (%)

PM-10 Drift Emissions Rate (tons/yr) = PM-10 Drift Emissions Rate (lbs/hr) x 8,760 (hr/yr) x 1/2,000 (ton/lb)

*PM-2.5 = PM-10

**Appendix A: Emissions Calculations
Source-wide Summary**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Unlimited Potential to Emit (tons/yr)											
Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAP	Single HAP	
Wax Pattern Assembly Operation	0	0	0	0	0	10.49	0	0	0.97	0.81	Xylene
Dip Manufacturing Operation	6.76	6.76	6.76	0	0	0	0	0	0	0	
Monoshell Latex Surface Coating Booth	0.12	0.12	0.12	0	0	0.002	0	0	0	0	
Sanding Towers	112.66	112.66	112.66	0	0	0	0	0	0	0	
Aluminum Oxide Barrel Sander	0.01	0.01	0.01	0	0	0.01	0	0	0	0	
Dewax Furnace	3.56	3.56	3.56	0	0	0.40	0	0	0	0	
Induction Ovens	2.32	2.32	2.32	0	0	0	0	0	1.86	1.39	Nickel
Hot Topping	0	0	0	0	0	0	0	0	9.75	9.75	HF
Pneumatic Shell	213.87	213.87	213.87	0	0	0	0	0	0	0	
Acid Etch	0	0	0	0	0	0	0	0	1.40	1.40	HCl
Post-Cast Baghouse	234.11	234.11	234.11	0	0	0	0	0	68.13	49.66	Nickel
Carter Day Baghouse	375.82	375.82	375.82	0	0	0	0	0	2.41	1.88	Nickel
West Metals Baghouse	401.48	401.48	401.48	0	0	0	0	0	1.20	0.92	Nickel
Natural Gas Combustion	0.59	2.35	2.35	0.19	30.90	1.70	25.96	37,307	0.58	0.56	Hexane
Emergency Generators	0.38	0.38	0.38	0.35	5.35	0.43	1.15	199	0.005	0.001	Formaldehyde
Potassium Hydroxide Storage Tanks	1.05	1.05	1.05	0	0	0	0	0	0	0	
Insignificant Grinding and Machining	0.13	0.06	0.06	0	0	0	0	0	0	0	
Welding	0.33	0.33	0.33	0	0	0	0	0	0.28	0.15	Cobalt
Cooling Towers	8.83	7.24	7.24	0	0	0	0	0	0	0	
Insignificant Pressure Washing Operations	2.00	2.00	2.00	0	0	0	0	0	0	0	
Total	1,364.00	1,364.10	1,364.10	0.54	36.25	13.04	27.11	37,506	86.58	53.85	Nickel

**Appendix A: Emissions Calculations
Source-wide Summary**

Company Name: Howmet Castings and Services, Inc.
Address City IN Zip: 1110 E. Lincolnway, LaPorte, IN 46350
Permit Number: 091-31556-00047
Reviewer: Brian Williams

Limited Potential to Emit (tons/yr)										
Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAP	Single HAP
Wax Pattern Assembly Operation	0	0	0	0	0	10.49	0	0	0.97	0.81 Xylene
Dip Manufacturing Operation	6.76	6.76	6.76	0	0	0	0	0	0	0
Monoshell Latex Surface Coating Booth	0.12	0.12	0.12	0	0	0.002	0	0	0	0
Sanding Towers ¹	13.59	11.27	11.27	0	0	0	0	0	0	0
Aluminum Oxide Barrel Sander	0.01	0.01	0.01	0	0	0.01	0	0	0	0
Dewax Furnace	3.56	3.56	3.56	0	0	0.40	0	0	0	0
Induction Ovens	2.32	2.32	2.32	0	0	0	0	0	1.86	1.39 Nickel
Hot Topping	0	0	0	0	0	0	0	0	9.75	9.75 HF
Removal ¹	25.22	10.69	10.69	0	0	0	0	0	0	0
Acid Etch	0	0	0	0	0	0	0	0	1.40	1.40 HCl
Post-Cast Baghouse ^{1,2}	12.61	12.61	12.61	0	0	0	0	0	10.16	7.60 Nickel
Carter Day Baghouse ^{1,2}	12.61	12.61	12.61	0	0	0	0	0		
West Metals Baghouse ^{1,2}	12.61	12.61	12.61	0	0	0	0	0		
Natural Gas Combustion	0.59	2.35	2.35	0.19	30.90	1.70	25.96	37,307	0.58	0.56 Hexane
Emergency Generators	0.38	0.38	0.38	0.35	5.35	0.43	1.15	199	0.005	0.001 Formaldehyde
Potassium Hydroxide Storage Tanks	1.05	1.05	1.05	0	0	0	0	0	0	0
Insignificant Grinding and Machining	0.13	0.06	0.06	0	0	0	0	0	0	0
Welding	0.33	0.33	0.33	0	0	0	0	0	0.28	0.15 Cobalt
Cooling Towers	8.83	7.24	7.24	0	0	0	0	0	0	0
Insignificant Pressure Washing Operations	2.00	2.00	2.00	0	0	0	0	0	0	0
Total	102.71	85.96	85.96	0.54	36.25	13.04	27.11	37,506	<25.00	<10

¹ The PM, PM10 and PM2.5 emissions from the sanding towers, pneumatic shell removal, post-cast, carter day, and west metals baghouses have been limited to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permits) not applicable.

² The Metal HAPs emissions from the post-cast, carter day, and west metals baghouses have been limited to render the requirements of 326 IAC 2-4.1 (Major Sources of HAP) and 326 IAC 2-7 (Part 70 Permits) not applicable.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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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: Sean Chapple
Howmet Castings and Services, Inc.
1110 E Lincolnway
LaPorte, IN 46350-2954

DATE: October 23, 2012

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

SUBJECT: Final Decision
FESOP - Transition from MSOP
091 - 31556 - 00047

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:
Chris Kraynak, Plant Mgr
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



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October 23, 2012

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: Howmet Castings and Services, Inc.
Permit Number: 091 - 31556 - 00047

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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

TO: Interested Parties / Applicant

DATE: October 23, 2012

RE: Howmet Castings and Services, Inc. / 091 - 31556 - 00047

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

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
<http://www.in.gov/ai/appfiles/idem-caats/>

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

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

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

Mail Code 61-53

IDEM Staff	LPOGOST 10/23/2012 Howmet Castings and Services, Inc. 091 - 31556 - 00047 final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Sean Chapple Howmet Castings and Services, Inc. 1110 E Lincolnway LaPorte IN 46350-2954 (Source CAATS) Via confirmed delivery										
2		Chris Kraynak Plant Mgr Howmet Castings and Services, Inc. 1110 E Lincolnway LaPorte IN 46350-2954 (RO CAATS)										
3		LaPorte Co Public Library - LaPorte Branch 904 Indiana Ave. LaPorte IN 46350-4307 (Library)										
4		LaPorte City Council/ Mayors Ofc. 801 Michigan Avenue LaPorte IN 46350 (Local Official)										
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. Scott Sanders Howmet Casting and Services, Inc 1110 E. Lincolnway LaPorte IN 46350 (Affected Party)										
8		LaPorte County Health Department County Complex, 4th Floor, 809 State St. LaPorte IN 46350-3329 (Health Department)										
9		Mr. Dick Paulen Barnes & Thornburg 121 W Franklin Street Elkhart IN 46216 (Affected Party)										
10												
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15												

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