INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	October 8, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	INTAT Precision, Inc.
Permit Level:	Title V – Renewal
Permit Number:	139-34150-00011
Source Location:	2148 State Road 3 North, Rushville, Indiana
Type of Action Taken:	Permit Renewal Revisions to permit requirements Changes that are administrative in nature

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34150.

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

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

Pursuant to IC 13-15-5-3, 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.

(continues on next page)

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.

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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

INTAT Precision, Inc.
2148 State Road 3 North
Rushville, Indiana 46173

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

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

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

Operation Permit No.: T139-34150-00011	
Issued by: Iryn Calilung Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: October 8, 2014 Expiration Date: October 8, 2019

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)] [326 IAC 2-7-1(22)]

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

Source Address:	2148 State Road 3 North, Rushville, Indiana 46173
General Source Phone Number:	(765) 932-5323
SIC Code:	3321 (Gray and Ductile Iron Foundries)
County Location:	Rush
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

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

(a) Core production facilities, for producing cores for all three ductile iron foundry lines (Plant 1, Plant 2, Plant 2, and Line 4), consisting of:

(1) Three (3) Core Sand Bins, constructed in 1988, and using a dust collector for particulate control, identified as DC-9, and exhausting to stack No. 9;

(2) Four (4) Isocure Cold Box Core Machines, identified as P4, P5, P6, constructed in 1988, and P7, constructed in 1994, each with a maximum capacity of processing 0.5 ton of core sand per hour, 8.0 pounds of resin per ton of core sand per hour, and 1.12 pounds of DMIPA catalyst per ton of core sand, using no control, and exhausting to stacks No. 10A and 10B.

Note: Plant 2 Ductile Iron Foundry Line 4 (Year 2013 modification) will also utilize the cores produced by these bins and machines.

Under 40 CFR 63, Subpart EEEEE (5E), the core production facilities are considered an affected source.

Plant 1

(b) One (1) Ductile Iron Foundry Line, identified as Plant 1, consisting of the following:

(1) Melting and Finishing operations, all units constructed in 1988 (unless otherwise specified), consisting of:

(A) One (1) Indoor Charge Handling System, with a total maximum capacity of 20 tons of metal per hour;

Note: The maximum throughput of metal for the Charge Handling System is limited to 20 tons per hour by the Power Control System.

(B) One (1) Melting System, identified as P8, with a total maximum capacity of 20 tons of metal per hour, consisting of three (3) Electric Induction Furnaces, identified as P1, P2, and P3, each with a maximum throughput capacity of 10 tons of metal per hour, using two (2) baghouses for particulate control, identified as DC-3A and DC-3B, and exhausting to common stack No. 3;

Note: The maximum throughput of metal for the Melting System is limited to 20 tons per hour by the maximum throughput from the Indoor Charge Handling system.

(C) One (1) Holding system consisting of the following equipment:

(i) Two (2) Electric Holding Furnaces, identified as P9, each with a holding capacity of 50 tons and a total maximum throughput capacity of 100 tons of metal per hour, using no control, and exhausting indoors;

(ii) Four (4) natural gas-fired Ladle Heaters, collectively identified as P10, all constructed in 2004, using no control, and exhausting indoors:

(a) Two (2) of which are metal treatment ladle heaters, each with a maximum heat input capacity of 1.0 MMBtu/hr, and

(b) Two (2) of which are pouring ladle heaters, each with a maximum heat input capacity of 0.4 MMBtu/hr,

(D) One (1) Inoculation system, identified as P11, replaced in 2004, consisting of two (2) metal treatment ladles, each with a maximum throughput capacity of 10 tons of metal per hour, each ladle is using a baghouse (DC-3A and DC-3B) for particulate control, and exhausting to a common stack No. 3; and

Note: Baghouse DC-3A is a common control for the Melting System and Inoculation system.

(E) Seven (7) grinders, identified as Grinders 3 and 4, constructed in 1988, and Grinders 5 through 9, constructed in 2009, with a total maximum capacity of 12 tons of metal per hour, using four (4) dust collectors for particulate control, and exhausting inside the building.

Note: Grinders 3, 4, and 5 share a common dust collector, while Grinders 6 to 9 each has its own dust collector.

(2) One (1) Casting Line, identified as Casting Line 2, constructed in 2004, consisting of the following equipment:

(A) One (1) Sand System, consisting of seven (7) units, identified as P32B, P33B, P34B, P35B, P36B, P37B and P39B, with a total maximum

capacity of 70 tons of sand per hour, using baghouse BH6400 for particulate control, and exhausting to stack No. 6400;

(B) One (1) Pouring station, identified as P13B, with a maximum capacity of 15 tons of metal poured per hour, using baghouse DC-3B for particulate control, and exhausting to stack No. 3;

Note: Baghouse DC-3B is a common control for the Melting System, Inoculation system, and Pouring Station.

(C) One (1) Cooling line, identified as P14B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control, and exhausting to stack No. 6200;

(D) One (1) Shakeout unit, identified as P16B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control and an advanced oxidation system for VOC control, and exhausting to stack No. 6200;

(E) One (1) Bad Heat Shakeout unit controlled by baghouse DC-5, and exhausting to stack No. 5;

Note: An advanced oxidation system is used in conjunction with Plant 1 casting line to reduce VOC emissions from the Pouring station, Cooling line, and Shakeout units through acoustic sonication and the incorporation of ozone and hydrogen peroxide in the water supply to the muller.

(F) Casting Conveyors and Desprue operations, identified as P17B, P18B, P19B, P20B, P21B and P22B, with a maximum capacity of 15 tons of metal per hour, using three (3) baghouses for particulate control, DC-7 and DC-8B, both exhausting inside the building, and BH6200, exhausting to stack No. 6200; and

Note: Baghouse BH6200 is common control for the Cooling line, Shakeout unit, Casting Conveyors, and Desprue operations.

(G) Three (3) Shotblast units, identified as P40, P41 and P42, each with a maximum capacity of 5.3 tons of metal per hour and a total maximum capacity of 9.0 tons of metal per hour, all shotblasting units using baghouse DC-8B for particulate control, and exhausting inside the building.

Note: Baghouse DC-8B is common control for the Casting Conveyors, Desprue operations, and Shotblast units.

(3) One (1) Shotblast unit, identified as Wheelabrator MeshBelt Blast, constructed in 2001, with a maximum capacity of 11.0 tons of metal per hour, using baghouse DC-13 for particulate control, and exhausting internally.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 1 is considered an affected source.

Plant 2

(c) One (1) Ductile Iron Foundry Line, all units constructed in 1997 (unless otherwise specified), identified as Plant 2, consisting of the following:

(1) One (1) Indoor Charge Handling system, identified as 1000A, modified in 2013, with a nominal capacity of 20 tons of metal per hour, using no control, and exhausting indoors;

Note: This Indoor Charge Handling system (1000A) is common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(2) One (1) Ductile Iron Conversion Station, identified as 1150, modified in 2013, with a nominal capacity of 25 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: This Ductile Iron Conversion Station (1150) is common for the Ductile Iron Foundry Lines identified as Plant 2 and Line 4.

(3) One (1) Melting System, identified as 1110, modified in 2013, consisting of two (2) Electric Induction Furnaces, each with a nominal capacity of 10 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: These electric induction furnaces (1110) are common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(4) One (1) Electric Holding Furnace, with a maximum capacity of 10 tons of metal per hour, using no control, and exhausting indoors

(5) Two (2) natural gas-fired Ladle Heaters, identified as 6600 and 6610, each with a maximum heat input rate of 2.0 MMBtu per hour, using no control, and exhausting indoors;

(6) One (1) Pouring Station, identified as 2000, modified in 2013 to increase maximum throughput, with a nominal capacity of 20 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

(7) One (1) Mold Machine, identified as 2010, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: Baghouse BH6010 is a common control for the Ductile Iron Conversion Station (1150), Electric Induction Furnaces (1110), Pouring Station (2000), and Mold Machine (2010)

(8) One (1) Casting Conveyor System and one (1) Cooling Conveyor System, identified as 2015 and 2020, respectively, modified in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6020 and BH6030 for particulate control, and exhausting to stack No. 6020, 6030A and 6030B;

(9) One (1) Casting Shakeout System, identified as 3010, replaced in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6030 for particulate control, and exhausting to stack No. 6030A and 6030B;

(10) One (1) Sand and Waste Sand Handling System, identified as 4000, 4140 and 5000, with a maximum capacity of 70 tons of sand per hour, using baghouses BH6020 and BH6040 for particulate control, and exhausting to stack No. 6020 and 6040;

Note: Baghouse BH6020 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), and Sand and Waste Sand Handling System (4000, 4140, 5000).

(11) One (1) Shotblast unit, identified as Final Blast 3090, with a maximum capacity of 10 tons of metal per hour, using baghouse BH6030, and exhausting to stack No. 6030A and 6030B; and

Note: Baghouse BH6030 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), Casting Shakeout System (3010), and Final Blast 3090.

(12) One (1) Finishing operation consisting of trim presses, identified as 8000, with a maximum capacity of 5.5 tons of metal per hour, using no control, and exhausting indoors.

(13) Six (6) Bench Grinders, modified in 2013, with a total nominal capacity of 5.5 tons of metal per hour, exhausting inside/outside the building, and consisting of the following:

(A) Cells 1 and 2, using fabric filter AAF for particulate control;

(B) Cell 3, using fabric filter DC#3 for particulate control;

(C) Cell 4, controlled by fabric filter DC#4 for particulate control;

(D) Cell 11, controlled by fabric filter DC#1 for particulate control; and

(E) Cell 12 controlled by Aercology #1.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2 is considered an affected source.

Line 4 in Plant 2

(d) One (1) Ductile Iron Foundry Line, all units constructed in 2013 (unless otherwise specified), identified as Plant 2, Line 4, consisting of the following:

(1) One (1) Electric Induction Furnace, identified as EU-N1, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N1A for particulate control, and exhausting to Stack S-N1.

(2) One (1) Sand Handling System, identified as EU-N2A, and one (1) Return Sand Handling System, identified as EU-N2B, with a nominal capacity of 75 tons of sand per hour, both systems using Baghouse DC-N1B for particulate control, exhausting to Stack S-N1.

(3) One (1) Pouring Station, identified as EU-N3, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and mold vent ignition system for VOC control, and exhausting to Stack S-N2.

(4) One (1) Cooling Line, identified as EU-N4, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(5) One (1) Casting Shakeout System, identified as EU-N5, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(6) One (1) Bad Heat Shakeout System, identified as EU-N5A, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(7) One (1) Shot Blast Unit, identified as EU-N6, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and exhausting to Stack S-N2.

Note: Baghouse DC-N2 is common control for the Pouring Station (EU-N3), Cooling Line (EU-N4), Casting Shakeout system (EU-N5), Bad Heat Shakeout system (EU-N5A) and Shot Blast unit (EU-N6).

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2, Line 4 is considered an affected source.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:

(1) Two (2) natural gas-fired boilers, identified as P40 and P41, constructed in 1988, with a maximum heat capacity of 0.9 and 1.2 million Btu per hour, respectively;

(b) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6: maintenance parts cleaner using mineral spirits solvent that is 100% recycled, with a maximum throughput of 120 gallons per 12 months;

(c) Six (6) Scrap Bays, identified as P47 through P52, each with PM emissions of approximately 0.16 pound per hour;

(d) Maintenance shop operations, identified as P58 and P59, each with PM emissions of approximately 0.1 pounds per hour;

(e) Two (2) Collector Penthouses, identified as P53 and P54, each with PM emissions of approximately 0.16 pounds per hour;

(f) One (1) Material Separator (baghouse fallout collection), with PM emissions approximately 0.6 pounds per hour;

(g) One (1) 429 hp diesel-fired emergency generator located in Plant 1, identified as EG1, and installed in 1989;

Under 40 CFR 63, Subpart ZZZZ, EG1 is considered an existing stationary RICE.

(h) One (1) 469 hp diesel-fired emergency generator located in Plant 2, identified as EG2, and installed in 1998; and

Under 40 CFR 63, Subpart ZZZZ, EG2 is considered an existing stationary RICE.

(i) One (1) 469 hp diesel-fired emergency generator located in Plant 2, Line 4, identified as EG3, and approved for construction in 2013.

Under 40 CFR 63, Subpart ZZZZ, EG3 is considered a new stationary RICE.

Under 40 CFR 60, Subpart IIII, EG3 is considered an affected source.

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

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:

(1) One (1) natural gas-fired heater to dry scrap metal in Plant 1, rated at 1.0 MMBtu per hour.

(2) One (1) natural gas-fired heater, identified as P50, located in Plant 1, rated at 2.5 MMBtu per hour.

(b) Combustion source flame safety purging on startup;

(c) Vessels storing the following: lubricating oils, hydraulic oils, machining oils, and machining fluids.

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

(e) Application of oils, greases, lubricants, and nonvolatile materials as temporary protective coatings.

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

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

(h) Filter or coalescer media changeout.

(i) Two (2) Sand Towers for the gray and ductile iron foundry line, identified as P55 and P56, constructed in 1988 (emissions are included in sand handling calculations);

(j) Other activities:

(1) One (1) scrap yard; and

(2) Two (2) fixed roof resin storage tanks, each with a maximum storage capacity of 2,000 gallons.

(k) One (1) Die Quench Operation, identified as Die Quench, approved in 2014 for construction, and consisting of the following:

(1) One (1) shot blast operation, controlled by a 2,630 acfm baghouse with an outlet grain loading rate of 0.03 gr/dscf;

(2) One (1) spot welding operation;

(3) Four (4) electric chillers;

(4) One (1) electric IR oven;

(5) One (1) heat treat furnace with a maximum heat input capacity of 0.036 million Btu per hour; and

(6) One (1) 500-gallon rust proofing dip tank, utilizing a water-based rust inhibitor containing no solvents or petroleum products;

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T139-34150-00011, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T139-34150-00011 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.

[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

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

subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

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

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

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

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

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

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

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

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

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

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

(4) The Permittee notifies the:

Indiana Department of Environmental Management

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

and

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

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

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

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

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

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

(3) Any change in emissions; and

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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

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

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

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

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

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

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

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

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

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

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

C.7 Performance Testing [326 IAC 3-6]

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64] [326 IAC 3-8]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
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 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, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

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

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

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

C.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

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

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

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

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

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

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

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

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

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

(1) monitoring results;

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

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

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

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

(II)

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

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring

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

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

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

(d) Elements of a QIP:

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

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

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

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

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

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

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the

adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

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

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

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

(AA) All calibration and maintenance records.

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

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

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

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

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

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

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

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

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

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

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

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

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

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3] [40 CFR 64] [326 IAC 3-8]

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

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

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

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime

associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(b) The address for report submittal is:

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

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

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

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

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

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

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

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

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

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

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.18 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: Core production

(a) Core production facilities, for producing cores for all three ductile iron foundry lines (Plant 1, Plant 2, Plant 2, and Line 4), consisting of:

(1) Three (3) Core Sand Bins, constructed in 1988, and using a dust collector for particulate control, identified as DC-9, and exhausting to stack No. 9;

(2) Four (4) Isocure Cold Box Core Machines, identified as P4, P5, P6, constructed in 1988, and P7, constructed in 1994, each with a maximum capacity of processing 0.5 ton of core sand per hour, 8.0 pounds of resin per ton of core sand per hour, and 1.12 pounds of DMIPA catalyst per ton of core sand, using no control, and exhausting to stacks No. 10A and 10B.

Under 40 CFR 63, Subpart EEEEE (5E), the core production facilities are considered an affected source.

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

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

D.1.1 PSD Minor Limit - PM and PM_{10} [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable:

(a) Total PM emissions from the three (3) Core Sand Bins (Stack 9), except the emissions associated with Plant 2, Line 4, shall not exceed 0.82 pound per hour; and

(b) Total PM_{10} emissions from the three (3) Core Sand Bins (Stack 9), except the emissions associated with Plant 2, Line 4, shall not exceed 0.82 pound per hour.

Compliance with these emission limits, in addition to the limits listed in condition D.2.3 and unlimited emissions from insignificant activities, limits PM and PM_{10} emissions from the units constructed in 1988 to less than 100 tons per year each. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to these units.

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(3), the allowable particulate emission rate from the three (3) Core Sand Bins shall not exceed 6.54 pounds per hour when operating at a process weight rate 2.01 tons per hour.

The pounds per hour limitations were calculated by the following:

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

$E = 4.10 * P^{0.67}$

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

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.1.4 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Conditions D.1.1 and D.1.2, the dust collector for particulate control shall be in operation and control emissions at all times the core sand bins and isocure sand box core machines are in operation.

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

D.1.5 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust (Stack 9) for the dust collector used in conjunction with the core sand bins and isocure sand box core machines shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. Failure to take reasonable response steps shall be considered a deviation from this permit.

D.1.6 Parametric Monitoring

The Permittee shall record the pressure drop across the dust collector used in conjunction with the core sand bins and isocure sand box core machines, at least once per day when the units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 to 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 Permitee'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 reasonable 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

D.1.7 Broken or Failed Baghouse 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 baghouses pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks or dust traces.

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

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.5, the Permittee shall maintain a daily record of visible emission notations of the stack exhaust for the dust collector used in conjunction with the core sand bins and isocure sand box core machines. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.1.6, the Permittee shall maintain a daily record of the pressure drop across the dust collector used in conjunction with the core sand bins and isocure sand box core machines. 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).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 1

(b) One (1) Ductile Iron Foundry Line, identified as Plant 1, consisting of the following:

(1) Melting and Finishing operations, all units constructed in 1988 (unless otherwise specified), consisting of:

(A) One (1) Indoor Charge Handling System, with a total maximum capacity of 20 tons of metal per hour;

Note: The maximum throughput of metal for the Charge Handling System is limited to 20 tons per hour by the Power Control System.

(B) One (1) Melting System, identified as P8, with a total maximum capacity of 20 tons of metal per hour, consisting of three (3) Electric Induction Furnaces, identified as P1, P2, and P3, each with a maximum throughput capacity of 10 tons of metal per hour, using two (2) baghouses for particulate control, identified as DC-3A and DC-3B, and exhausting to common stack No. 3;

Note: The maximum throughput of metal for the Melting System is limited to 20 tons per hour by the maximum throughput from the Indoor Charge Handling system.

(C) One (1) Holding system consisting of the following equipment:

(i) Two (2) Electric Holding Furnaces, identified as P9, each with a holding capacity of 50 tons and a total maximum throughput capacity of 100 tons of metal per hour, using no control, and exhausting indoors;

(ii) Four (4) natural gas-fired Ladle Heaters, collectively identified as P10, all constructed in 2004, using no control, and exhausting indoors:

(a) Two (2) of which are metal treatment ladle heaters, each with a maximum heat input capacity of 1.0 MMBtu/hr, and

(b) Two (2) of which are pouring ladle heaters, each with a maximum heat input capacity of 0.4 MMBtu/hr,

(D) One (1) Inoculation system, identified as P11, replaced in 2004, consisting of two (2) metal treatment ladles, each with a maximum throughput capacity of 10 tons of metal per hour, each ladle is using a baghouse (DC-3A and DC-3B) for particulate control, and exhausting to a common stack No. 3; and

Note: Baghouse DC-3A is a common control for the Melting System and Inoculation system.

(E) Seven (7) grinders, identified as Grinders 3 and 4, constructed in 1988, and Grinders 5 through 9, constructed in 2009, with a total maximum capacity of 12 tons of metal per hour, using four (4) dust collectors for particulate control, and exhausting inside the building.

Note: Grinders 3, 4, and 5 share a common dust collector, while Grinders 6 to 9 each has its own dust collector.

(2) One (1) Casting Line, identified as Casting Line 2, constructed in 2004, consisting of the following equipment:

(A) One (1) Sand System, consisting of seven (7) units, identified as P32B, P33B, P34B, P35B, P36B, P37B and P39B, with a total maximum capacity of 70 tons of sand per hour, using baghouse BH6400 for particulate control, and exhausting to stack No. 6400;

(B) One (1) Pouring station, identified as P13B, with a maximum capacity of 15 tons of metal poured per hour, using baghouse DC-3B for particulate control, and exhausting to stack No. 3;

Note: Baghouse DC-3B is a common control for the Melting System, Inoculation system, and Pouring Station.

(C) One (1) Cooling line, identified as P14B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control, and exhausting to stack No. 6200;

(D) One (1) Shakeout unit, identified as P16B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control and an advanced oxidation system for VOC control, and exhausting to stack No. 6200;

(E) One (1) Bad Heat Shakeout unit controlled by baghouse DC-5, and exhausting to stack No. 5;

Note: An advanced oxidation system is used in conjunction with Plant 1 casting line to reduce VOC emissions from the Pouring station, Cooling line, and Shakeout units through acoustic sonication and the incorporation of ozone and hydrogen peroxide in the water supply to the muller.

(F) Casting Conveyors and Desprue operations, identified as P17B, P18B, P19B, P20B, P21B and P22B, with a maximum capacity of 15 tons of metal per hour, using three (3) baghouses for particulate control, DC-7 and DC-8B, both exhausting inside the building, and BH6200, exhausting to stack No. 6200; and

Note: Baghouse BH6200 is common control for the Cooling line, Shakeout unit, Casting Conveyors, and Desprue operations.

(G) Three (3) Shotblast units, identified as P40, P41 and P42, each with a maximum capacity of 5.3 tons of metal per hour and a total maximum capacity of 9.0 tons of metal per hour, all shotblasting units using baghouse DC-8B for particulate control, and exhausting inside the building.

Note: Baghouse DC-8B is common control for the Casting Conveyors, Desprue operations, and Shotblast units.

(3) One (1) Shotblast unit, identified as Wheelabrator MeshBelt Blast, constructed in 2001, with a maximum capacity of 11.0 tons of metal per hour, using baghouse DC-13 for particulate control, and exhausting internally.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 1 is considered an affected source.

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

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

D.2.1 PSD BACT Limit - PM_{10} [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3:

(a) Opacity for stack No. DC-3A, DC-3B, BH6200, BH6400, and DC-5 shall not exceed ten percent (10%) for more than three (3) consecutive six (6) minute averaging periods.

(b) The Ladle Heaters are exclusively natural gas fired and are therefore considered to meet the requirements for BACT.

(c) The Permittee shall comply with the following BACT required emission limits for PM_{10} from the Plant 1, Casting Line 2 processes (PM_{10} limits include both filterable and condensable):

Control Device	Process	Filterable PM_{10} Emission Limitation		Total PM_{10} Emission Limitation (lb/ton) (Filterable & Condensable)
		(gr/dscf)	(lb/hr)	
DC-3A	Melting (P8) & Inoculation (P11)	0.003	1.7	0.633 lb/ton metal
DC-3B	Melting (P8), Inoculation (P11) & Pouring (P13B),	0.003	1.7	
BH6400	Sand Handling (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	0.003	1.13	0.02 lb/ton sand
BH6200	Cooling (P14B), Shakeout (P16B), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.003	2.85	1.045 lb/ton metal
DC-8B (exhausts inside)	Shotblast (P40, P41, P42), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.003	1.03	0.085 lb/ton metal
DC-7 (exhausts inside)	Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.003	0.55	0.085 lb/ton metal
DC-5	Bad Heat Shakeout	0.003	0.45	0.03 lb/ton metal

D.2.2 PSD BACT Limit - VOC [326 IAC 2-2] [326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 and 326 IAC 8-1-6, the following conditions shall apply to the Pouring station (P13B), Cooling line (P14B), Shakeout (P16B) and Bad Heat Shakeout processes of Plant 1, Casting Line 2:

(a) Material Substitution and Lower-Emitting Processes/Practices shall be used to limit VOC emissions.

(b) VOC emissions shall not exceed 1.2 pounds per ton of metal throughput to the Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B) and Bad Heat Shakeout operations combined.

(c) The throughput of metal to the Pouring, Cooling and Shakeout operations (P13B, P14B, and P16B) and Bad Heat Shakeout operations shall not exceed 79,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The installed Advanced Oxidation (AO) system shall be used with a minimum VOC reduction efficiency of 20%.

D.2.3 PSD Minor Limit - PM and PM_{10} [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, PM and PM_{10} emissions and material throughput of the following units shall not exceed the following limits:

Process	PM Emission Limitation (lb/ton material)	PM_{10} Emission Limitation (lb/ton material)	Material throughput (ton/12 consecutive months)
Charge Handling Operations	0.24 lbs/ton metal	0.24 lbs/ton metal	79,000 tons of metal
Melting System (P8)	0.20 lbs/ton metal	0.20 lbs/ton metal	
Holding Furnace (P9)	0.10 lbs/ton metal	0.10 lbs/ton metal	

Compliance with these throughput and emission limits, in addition to the limits listed in Condition D.1.1 for the core production facilities and in Condition D.2.6 for Grinders 3 and 4, and unlimited emissions from insignificant activities, limits PM and PM_{10} emissions from the units constructed in 1988 to less than 100 tons per year each. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to these units.

D.2.4 PSD Minor Limit - PM and PM_{10} [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable:

(a) PM emissions from the Wheelabrator MeshBelt blast unit shall each not exceed 5.7 pounds per hour.

(b) PM_{10} emissions from the Wheelabrator MeshBelt blast unit shall each not exceed 3.4 pounds per hour.

Compliance with these emission limits, limits PM and PM_{10} emissions from this unit constructed in 2001 to less than 25 and 15 tons per year, respectively. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to these units.

D.2.5 PSD Minor Limit - PM and CO [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable:

(a) PM emissions and material throughput from the following units shall not exceed the following limits:

Baghouse	Process	PM Emission Limitation (lb/ton material)	Material throughput (ton/12 consecutive months)
DC-3A / DC-3B	Melting (P8), Inoculation (P11), & Pouring (P13B)	0.17 lbs/ton metal poured	79,000 tons of metal
BH6200	Cooling (P14B), Shakeout (P16B), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.19 lbs/ton metal poured	
DC-8B	Shotblast (P40, P41, P42), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.11 lbs/ton metal poured	
DC-7	Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.037 lbs/ton metal poured	
DC-5	Bad Heat Shakeout	0.03 lbs/ton metal poured	
BH6400	Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	0.016 lbs/ton sand	368,667 tons of sand

(b) CO emissions from Pouring station (P13B), Cooling line (P14B), Shakeout unit (P16B), Bad Heat Shakeout unit combined shall not exceed 2.5 pounds per ton of metal throughput.

Compliance with these emission limits, limits PM and CO emissions from these units constructed or modified in 2004 to less than 25 and 100 tons per year, respectively. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to these units.

D.2.6 PSD Minor Limit - PM and PM_{10} [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable:

(a) The combined throughput of metal for Grinders 3, 4, 5, 6, 7, 8, and 9 shall be less than 79,000 tons per 12 consecutive month period with compliance determined at the end of each month.

(b) PM emissions from Grinders 3, 4, 5, 6, 7, 8, and 9 combined shall not exceed 0.2 pound per ton of metal throughput.

(c) PM_{10} emissions from Grinders 3, 4, 5, 6, 7, 8, and 9 combined shall not exceed 0.2 pound per ton of metal throughput.

(d) Emissions of PM and PM_{10} from the grinding process shall not exceed the following

Process	PM Emission Limitation (lb/hour)	PM_{10} Emission Limitation (lb/hour)
Grinders 3,4,5	0.53	0.53
Grinder 6	0.28	0.28
Grinder 7	0.28	0.28
Grinder 8	0.53	0.53

Grinder 9	0.18	0.18

Compliance with these emission limits, limits PM and PM_{10} emissions from these units constructed in 2009 to less than 25 and 15 tons per year, respectively. This also renders 326 IAC 2-2 not applicable to Grinders 3 and 4 (1988) Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to these units.

D.2.7 Particulate [326 IAC 6-3-2]

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

Emission unit/process (Unit ID)	Dust collector/ Baghouse	Process Weight Rate (ton/hr)	Allowable emissions (lb/hr)
Indoor charge handling	No control	20	30.51
Melting system - 3 electric induction furnaces (P8)	DC-3A and DC-3B	20	30.51
Holding system - electric holding furnace (P9)	No control	20	30.51
Inoculation - metal treatment ladles (P11)	DC-3A and DC-3B	20	30.51
Grinder 3	Dust collector	1.25	4.76
Grinder 4	Dust collector	1.25	4.76
Grinder 5	Dust collector	1.25	4.76
Grinder 6	Dust collector	1.25	4.76
Grinder 7	Dust collector	1.25	4.76
Grinder 8	Dust collector	3.75	9.96
Grinder 9	Dust collector	1.25	4.76
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	BH6400	70*	47.77
Pouring Station (P13B)	DC-3B	85*	49.66
Cooling line (P14B)	BH6200	85*	49.66
Shakeout unit (P16B)	BH6200	85*	49.66
Bad heat shakeout unit	DC-5	85*	49.66
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B)	BH6200 DC-8B, DC-7	15	25.16
Shotblast (P40, P41, P42)	DC-8B	9	17.87
Wheelabrator blast unit	DC-13	11	20.44

* Process weight includes metal and sand throughput

The pounds per hour limitations were calculated by the following:

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

$E = 4.10 * P^{0.67}$

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

OR

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

$E = 55.0 * P^{0.11} - 40$

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

D.2.8 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.2.9 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Conditions D.2.1(c); D.2.3; D.2.4; D.2.5(a); D.2.6(b),(c),(d); and D.2.7, the dust collectors and baghouses for particulate control shall be in operation and control emissions at all times the respective emission units are in operation.

D.2.10 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to comply with Conditions D.2.1(c), D.2.3, D.2.5(a), and D.2.7, the Permittee shall perform PM and PM_{10} testing for the following facilities utilizing methods as approved by the Commissioner:

(1) Baghouse DC-3A used in conjunction with the Melting System (P8) and Inoculation station (P11);

(2) Baghouse DC-3B used in conjunction with the Melting System (P8), Inoculation station (P11), and Pouring station (P13B)

(3) Baghouse BH6400 used in conjunction with the Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)

(4) Baghouse BH6200 used in conjunction with the Cooling line (P14B), Shakeout unit (P16B), and Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B)

(5) Baghouse DC-8B used in conjunction with the Shotblast units (P40, P41, P42) and Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B);

(6) Baghouse DC-7 used in conjunction with the Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B);

(b) In order to comply with Conditions D.2.2(b) and D.2.5(b), the Permittee shall perform VOC and CO testing for the Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B) utilizing methods as approved by the Commissioner:

The tests required in (a) and (b) above shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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 2-7-5(1)] [326 IAC 2-7-6(1)]

D.2.11 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the indoor charge handling system and the stack exhausts for Baghouses DC-3A and DC-3B (Stack 3), Baghouse BH6400 (Stack 6400), Baghouse BH6200 (Stack 6200), and Baghouse DC-5 (Stack 5) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for PM and/or PM_{10} for the Inoculation station (P11), Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B), Pouring station (P13B), and Shakeout operations (P16B).

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. Failure to take reasonable response steps shall be considered a deviation from this permit.

D.2.12 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across baghouses DC-3A, DC-3B, BH6400, BH6200, DC-7, DC-8B, DC-5, and DC-13, at least once per day when the units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 to 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 Permitee'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 reasonable response steps shall be considered a deviation from this permit.

The instruments 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for PM and/or PM_{10} for the Inoculation station (P11), Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B), Pouring station (P13B), Shakeout operations (P16B), Shotblast (P40, P41, P42), and Wheelabrator.

D.2.13 Broken or Failed Baghouse 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 baghouses pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks or dust traces.

D.2.14 Parametric Monitoring - Advanced Oxidation (AO) System [40 CFR 64]

(a) The Permittee shall monitor and record the ultra-sonic power of the AO system or equivalent system used in conjunction with the Pouring station (P13B), Cooling line (P14B), Shakeout unit (P16B) and Bad Heat Shakeout unit, at least once per day when the units are in operation. When for any one reading, the ultra-sonic power is less than 1100 W or a minimum established during the latest stack test for Sensors A and B, or the ultra-sonic power is less than 800 W or a minimum established during the latest stack test for Sensor C, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. An ultra-sonic power reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor and record the ozone generator plasma voltage of the AO system or equivalent system used in conjunction with the Pouring (P13B), Cooling (P14B), Shakeout (P16B) and Bad Heat Shakeout processes, at least once per day when the units are in operation. When for any one reading, the ozone generator plasma voltage is less than 2400 V or a minimum established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. An ozone generator plasma voltage reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

(c) The Permittee shall monitor and record the hydrogen peroxide concentration of the AO system or equivalent system used in conjunction with the Pouring (P13B), Cooling (P14B), Shakeout (P16B) and Bad Heat Shakeout processes, at least once per day when the units are in operation. When for any one reading, the hydrogen peroxide reading is less than 1,000 ppm or a minimum established during the latest stack test for Sensor C, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. A hydrogen peroxide concentration reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

The instruments used for determining the ultra-sonic power, the ozone generator plasma voltage, and the hydrogen peroxide concentration 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

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

D.2.15 Record Keeping Requirements

(a) To document the compliance status with Conditions D.2.2(c), D.2.3, and D.2.5(a), the Permittee shall maintain records of the tons of metal throughput in Plant 1 Melting, Finishing, and Casting operations per month;

(b) To document the compliance status with Conditions D.2.5(a) the Permittee shall maintain records of the tons of sand throughput in the Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B) per month;

(c) To document the compliance status with Condition D.2.6(a), the Permittee shall maintain records of the tons of metal throughput in Grinders 3, 4, 5, 6, 7, 8, and 9.

(d) To document the compliance status with Condition D.2.11, the Permittee shall maintain a daily record of visible emission notations of the indoor charge handling system and stack exhaust from Stacks No. 3, 6400, 6200, and 5. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(d) To document the compliance status with Condition D.2.12, the Permittee shall maintain a daily record of the pressure drop across each of the baghouses. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day);

(e) To document the compliance status with Condition D.2.14, the Permittee shall maintain records of the ultra-sonic power, the ozone generator plasma voltage, and the hydrogen peroxide usage of the AO system.

(f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.2.16 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions 2.2(c), D.2.3, D.2.5(a), and D.2.6(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 2

(c) One (1) Ductile Iron Foundry Line, all units constructed in 1997 (unless otherwise specified), identified as Plant 2, consisting of the following:

(1) One (1) Indoor Charge Handling system, identified as 1000A, modified in 2013, with a nominal capacity of 20 tons of metal per hour, using no control, and exhausting indoors;

Note: This Indoor Charge Handling system (1000A) is common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(2) One (1) Ductile Iron Conversion Station, identified as 1150, modified in 2013, with a nominal capacity of 25 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: This Ductile Iron Conversion Station (1150) is common for the Ductile Iron Foundry Lines identified as Plant 2 and Line 4.

(3) One (1) Melting System, identified as 1110, modified in 2013, consisting of two (2) Electric Induction Furnaces, each with a nominal capacity of 10 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: These electric induction furnaces (1110) are common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(4) One (1) Electric Holding Furnace, with a maximum capacity of 10 tons of metal per hour, using no control, and exhausting indoors

(5) Two (2) natural gas-fired Ladle Heaters, identified as 6600 and 6610, each with a maximum heat input rate of 2.0 MMBtu per hour, using no control, and exhausting indoors;

(6) One (1) Pouring Station, identified as 2000, modified in 2013 to increase maximum throughput, with a nominal capacity of 20 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

(7) One (1) Mold Machine, identified as 2010, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: Baghouse BH6010 is a common control for the Ductile Iron Conversion Station (1150), Electric Induction Furnaces (1110), Pouring Station (2000), and Mold Machine (2010)

(8) One (1) Casting Conveyor System and one (1) Cooling Conveyor System, identified as 2015 and 2020, respectively, modified in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6020 and BH6030 for particulate control, and exhausting to stack No. 6020, 6030A and 6030B;

(9) One (1) Casting Shakeout System, identified as 3010, replaced in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6030 for particulate control, and exhausting to stack No. 6030A and 6030B;

(10) One (1) Sand and Waste Sand Handling System, identified as 4000, 4140 and 5000, with a maximum capacity of 70 tons of sand per hour, using baghouses BH6020 and BH6040 for particulate control, and exhausting to stack No. 6020 and 6040;

Note: Baghouse BH6020 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), and Sand and Waste Sand Handling System (4000, 4140, 5000).

(11) One (1) Shotblast unit, identified as Final Blast 3090, with a maximum capacity of 10 tons of metal per hour, using baghouse BH6030, and exhausting to stack No. 6030A and 6030B; and

Note: Baghouse BH6030 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), Casting Shakeout System (3010), and Final Blast 3090.

(12) One (1) Finishing operation consisting of trim presses, identified as 8000, with a maximum capacity of 5.5 tons of metal per hour, using no control, and exhausting indoors.

(13) Six (6) Bench Grinders, modified in 2013, with a total nominal capacity of 5.5 tons of metal per hour, exhausting inside/outside the building, and consisting of the following:

(A) Cells 1 and 2, using fabric filter AAF for particulate control;

(B) Cell 3, using fabric filter DC#3 for particulate control;

(C) Cell 4, controlled by fabric filter DC#4 for particulate control;

(D) Cell 11, controlled by fabric filter DC#1 for particulate control; and

(E) Cell 12 controlled by Aercology #1.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2 is considered an affected source.

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

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

D.3.1 PSD Minor Limit - PM and PM_{10}, VOC, and CO [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable:

(a) PM emissions from the charge handling operation (1000A) shall not exceed 0.12 pound per hour.

(b) PM_{10} emissions from the charge handling operation (1000A) shall not exceed 0.12 pound per hour.

(c) PM and PM_{10} emissions and material throughput for the following units shall not exceed the following limits:

Control Device(s)	Emission Units (ID)	PM/ PM_{10} Emission Limitation (lb/ton material)	Material throughput (ton/12 consecutive months)
BH6010	Conversion station (1150), Induction furnaces (1110), Pouring station (2000), Mold machine (2010)	0.50 lbs/ton metal	61,500 tons of metal
N/A	Electric holding furnace	0.10 lbs/ton metal	
BH6030	Casting and cooling conveyors (2015, 2020), Casting shakeout (3010), Final blast shotblast unit (3090)	1.45 lbs/ton metal	
BH6020	Casting and cooling conveyors (2015, 2020), Sand and waste sand handling (4000, 4140, 5000)	0.11 lbs/ton sand	430,500 tons of sand
BH6040	Sand and waste sand handling (4000, 4140, 5000)	0.05 lbs/ton sand	
Fabric filters (AAF, DC#3, DC#4, DC#1, and Aerocology #1)	Finish trim presses (8000), 6 grinders (Cells 1,2,3,4,11,12)	0.06 lbs/ton metal	48,180 tons of metal

(d) VOC emissions from Melting (1110), Inoculation (1150), Pouring (2000), the Casting conveyor & Cooling Conveyor system (2015 and 2020), and the Casting Shakeout system (3010) combined shall not exceed 0.8 pound per ton of metal throughput.

(e) CO emissions from Pouring station (2000), Casting and cooling conveyors (2015, 2020), and Casting shakeout (3010) combined shall not exceed 3.2 pounds per ton of metal throughput.

Compliance with these throughput and emission limits, in addition to unlimited emissions from insignificant activities, limits PM, PM_{10}, VOC, and CO emissions from the units constructed in 1997 to less than 100 tons per year each. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to these units.

D.3.2 Particulate [326 IAC 6-3-2]

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

Emission unit/process (Unit ID)	Control Device ID	Process Weight Rate (ton/hr)	Allowable emissions (lb/hr)
Indoor charge handling (1000A)	No control	20	30.51
Conversion Station (1150)	BH6010	25	35.43
Melting - Induction furnaces (1110)	BH6010	20	30.51
Electric holding furnace	No control	10	19.18
Pouring station (2000)	BH6010	20	30.51
Mold machine (2010)	BH6010	80*	49.06
Casting conveyor system (2015)	BH6020 and BH6030	80*	49.06
Cooling conveyor system (2020)	BH6020 and BH6030		
Casting shakeout system (3010)	BH6030	80*	49.06
Sand waste and sand handling (4000,4140, 5000)	BH6020 and BH6040	70*	47.77
Shotblast unit (Final blast 3090)	BH6030	10	19.18
Finish trim presses (8000)	-	5.5	12.85
Bench grinders (Cells 1,2,3,4,11,12)	Fabric filters (AAF, DC#3, DC#4, DC#1, Aercology#1)	5.5	12.85

* Process weight includes metal and sand throughput

The pounds per hour limitations were calculated by the following:

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

$E = 4.10 * P^{0.67}$

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

OR

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

$E = 55.0 * P^{0.11} - 40$

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

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.3.4 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Conditions D.3.1(a),(b),(f) and D.3.2 the dust collectors, baghouses, and fabric filters for particulate control shall be in operation and control emissions at all times the respective emission units are in operation.

D.3.5 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to comply with Conditions D.3.1(c) and D.3.2, the Permittee shall perform PM and PM_{10} testing for the following facilities utilizing methods as approved by the Commissioner:

(1) Baghouse BH6010 used in conjunction with the Conversion station (1150), Induction furnaces (1110), Pouring station (2000) and Mold machine (2010);

(2) Baghouse BH6020 used in conjunction with the Casting and cooling conveyors (2015, 2020) and Sand and waste sand handling (4000, 4140, 5000)

(3) Baghouse BH6030 used in conjunction with the Casting and cooling conveyors (2015, 2020), Casting shakeout (3010), and Final blast shotblast unit (3090)

(4) Baghouse BH6040 used in conjunction with the Sand and waste sand handling (4000, 4140, 5000)

(5) Fabric Filter AAF used in conjunction with the Grinder Cells #1 and 2

(b) In order to comply with Conditions D.3.1(e), the Permittee shall perform VOC testing for Melting (1110), Inoculation (1150), Pouring (2000), the Casting conveyor & Cooling Conveyor system (2015 and 2020), and the Casting Shakeout system (3010) utilizing methods as approved by the Commissioner.

(c) In order to comply with Conditions D.3.1(f), the Permittee shall perform CO testing for Pouring station (2000), Casting and cooling conveyors (2015, 2020), and Casting shakeout (3010) utilizing methods as approved by the Commissioner.

The tests required in (a), (b), and (c) above shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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 2-7-5(1)] [326 IAC 2-7-6(1)]

D.3.6 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the indoor charge handling system (1000A) and the stack exhausts for Baghouse BH6010 (Stack 6010), Baghouse BH6020 (Stack 6020), Baghouse BH6030 (Stacks 6030A and 6030B), Baghouse BH6040 (Stack 6040), and Fabric filters AAF, DC#3, DC#4, DC#1, and Aercology #1 (when exhausting outside) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for PM, PM_{10}, and/or $PM_{2.5}$ for the Conversion station (1150), Pouring station (2000), Sand waste and sand handling (4000, 4140, 5000), Shotblast unit (Final blast 3090), and Bench grinders (Cells 1, 2, 3, 4, 11, 12).

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. Failure to take reasonable response steps shall be considered a deviation from this permit.

D.3.7 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across baghouses BH6010, BH6020, BH6030, and BH6040, and fabric filters AAF, DC#3, DC#4, DC#1, and Aercology #1 at least once per day when the units are in operation. When for any one reading, the pressure drop across the baghouse or filter is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 to 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 Permitee'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 reasonable response steps shall be considered a deviation from this permit.

The instruments 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for PM, PM_{10}, and/or $PM_{2.5}$ for the Conversion station (1150), Pouring station (2000), Sand waste and sand handling (4000, 4140, 5000), Shotblast unit (Final blast 3090), and Bench grinders (Cells 1, 2, 3, 4, 11, 12).

D.3.8 Broken or Failed Baghouse 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 baghouses pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks or dust traces.

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

D.3.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.1(c), the Permittee shall maintain records of the following:

(1) Tons of metal throughput in Plant 2 Ductile Iron Foundry Line per month;

(2) Tons of sand throughput in the Sand and Waste Sand Handling System (4000, 4140 and 5000) per month; and

(3) Tons of metal throughput in the Finishing operation (8000) and six (6) bench grinders (Cells, 1, 2, 3, 4, 11, and 12) per month.

(d) To document the compliance status with Condition D.3.6, the Permittee shall maintain a daily record of visible emission notations of the indoor charge handling system (1000A) and the stack exhausts from Stacks No. 6010, 6020, 6030, 6040 and the stack exhaust for fabric filters AAF, DC#3, DC#4, DC#1, and Aercology #1 (when exhausting outdoors). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(e) To document the compliance status with Condition D.3.7, the Permittee shall maintain a daily record of the pressure drop across each of the baghouses and fabric filters. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day);

(f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.3.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.3.1(c) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 2, Line 4

(d) One (1) Ductile Iron Foundry Line, all units constructed in 2013 (unless otherwise specified), identified as Plant 2, Line 4, consisting of the following:

(1) One (1) Electric Induction Furnace, identified as EU-N1, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N1A for particulate control, and exhausting to Stack S-N1.

(2) One (1) Sand Handling System, identified as EU-N2A, and one (1) Return Sand Handling System, identified as EU-N2B, with a nominal capacity of 75 tons of sand per hour, both systems using Baghouse DC-N1B for particulate control, exhausting to Stack S-N1.

(3) One (1) Pouring Station, identified as EU-N3, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and mold vent ignition system for VOC control, and exhausting to Stack S-N2.

(4) One (1) Cooling Line, identified as EU-N4, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(5) One (1) Casting Shakeout System, identified as EU-N5, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(6) One (1) Bad Heat Shakeout System, identified as EU-N5A, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(7) One (1) Shot Blast Unit, identified as EU-N6, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and exhausting to Stack S-N2.

Note: Baghouse DC-N2 is common control for the Pouring Station (EU-N3), Cooling Line (EU-N4), Casting Shakeout system (EU-N5), Bad Heat Shakeout system (EU-N5A) and Shot Blast unit (EU-N6).

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2, Line 4 is considered an affected source.

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

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

D.4.1 PSD BACT Limit - VOC [326 IAC 2-2][326 IAC 8-1-6]

The combined VOC emissions from the EU-N3, EU-N4, and EU-N5 shall not exceed 0.8 pounds per ton of iron and the VOC emissions from EU-N3 shall be controlled by a mold vent off gas ignition system.

D.4.2 PSD Minor Limit - PM and PM_{10}, VOC, and CO [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable:

The following emission units constructed in 2013 or portion of emission units modified in 2013 shall be limited as follows

Line(s)	Emission Unit (ID)	Portion of throughput subject to limit
Plant 2, Line 4 (New units)	Electric induction furnace (EU-N1)	Entire unit
	Sand handling system (EU-N2A)	Entire unit
	Return sand handling system (EU-N2B)	Entire unit
	Pouring station (EU-N3)	Entire unit
	Cooling line (EU-N4)	Entire unit
	Casting shakeout system (EU-N5)	Entire unit
	Bad heat shakeout system (EU-N5A)	Entire unit
	Shot blast unit (EU-N6)	Entire unit
Plant 2 and Plant 2, Line 4 (Modified units)	Core sand bins and isocure cold box core machines (P4, P5, P6, P7)	Portion sent to Line 4
	Indoor change handling (1000A)	Portion sent to Line 4
	Conversion Station (1150)	Portion sent to Line 4
	Induction Furnaces (1110)	Portion sent to Line 4
	Six (6) grinders (Cells 1, 2, 3, 4, 11, and 12)	Portion sent to Line 4

(a) The PM emissions shall be less than 25 tons per twelve consecutive month period, with compliance determined at the end of each month.

(b) The PM_{10} emissions shall be less than 15 tons per twelve consecutive month period, with compliance determined at the end of each month.

(c) The $PM_{2.5}$ emissions shall be less than 10 tons per twelve consecutive month period, with compliance determined at the end of each month.

(d) The Lead emissions shall be less than 0.6 tons per twelve consecutive month period, with compliance determined at the end of each month.

(e) The VOC emissions shall be less than 40 tons per twelve consecutive month period, with compliance determined at the end of each month.

(f) The CO emissions shall be less than 100 tons per twelve consecutive month period, with compliance determined at the end of each month.

D.4.3 Particulate [326 IAC 6-3-2]

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

Emission unit/process (Unit ID)	Dust collector/ Baghouse	Process Weight Rate (ton/hr)	Allowable emissions (lb/hr)
Electric induction furnace (EU-N1)	DC-N1A	10	19.18
Sand handling system (EU-N2A)	DC-N1B	75	48.43
Return sand handling system (EU-N2B)	DC-N1B		
Pouring station (EU-N3)	DC-N2	90*	83.58
Cooling line (EU-N4)	DC-N2	90*	83.58

Casting shakeout system (EU-N5)	DC-N2	90*	83.58
Bad heat shakeout system (EU-N5A)	DC-N2	85*	80.44
Shot blast unit (EU-N6)	DC-N2	15	25.16

* Process weight includes metal and sand throughput

The pounds per hour limitations were calculated by the following:

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

$E = 4.10 * P^{0.67}$

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

OR

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

$E = 55.0 * P^{0.11} - 40$

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

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.4.5 Emission Calculations [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.4.1, the Permittee shall determine the emissions for each month as below:

(a) PM

PM emissions (tons/month)	=	{($EFPM_{Charge}$ * H_{M4}) + ($EFPM_{M4}$ * P_{M4}) + ($EFPM_{M2}$ * P_{M3}) +($EFPM_{DIC}$ * P_{DIC4}) + ($EFPM_{PCSS4}$ * P_{PCSS4}) + ($EFPM_{Sand4}$ * P_{Sand4}) + ($EFPM_{GRD}$ * P_{GRD4}) + ($EFPM_{Core}$ * P_{M4})} / 2000 lbs/ton
Where		
$EFPM_{Charge}$	=	PM emission factor (lb/hr) for Plant 2 Indoor Charge Handling System (1000A). 0.12 lb/hr shall be used. Since the Plant 2 Indoor Charge Handling System is common to both the Plant 2 and Line 4, the same lb/hr emission rate is used (PM Limit in Condition D.3.1(a)).
H_{M4}	=	Monthly hours (hr/month) during which the Plant 2 Indoor Charge Handling System (1000A) operated to feed metals at line 4.
$EFPM_{M4}$	=	PM emission factor (lb/ton of metal) for Induction Furnace (EU-N1) established during the most recent stack test. Until the test, 0.03 lb/ton emission factor shall be used.
P_{M4}	=	Monthly throughput of metal (tons/month) melted in Line 4 Induction Furnace (EU-N1)
$EFPM_{M2}$	=	PM emission factor (lb/ton metal) for Plant 2 Induction Furnaces (1110) established during the most recent stack test. Until the test, 0.03 lb/ton metal emission factor shall be used.
P_{M3}	=	Monthly throughput of metal (tons/month) melted in the Induction Furnace (1110) and poured on Line 4.
$EFPM_{DIC}$	=	PM emission factor (lb/ton metal) for the Plant 2 Ductile Iron Conversion process (1150) established during the most recent stack test. Until the test, 0.03 lb/ton metal emission factor shall be used.
P_{DIC4}	=	Monthly throughput of ductile iron (tons/month) poured on line 4.
$EFPM_{PCSS4}$	=	PM emission factor (lb/ton metal) for Line 4 Pouring, Cooling, Shakeout and Shotblast (EU-N3, EU-N4, EU-N5, EU-N5A and EU-N6) established during the most recent stack test. Until the test, 0.13 lb/ton metal emission factor shall be used.
P_{PCSS4}	=	Monthly throughput of metal (tons/month) poured on line 4.
$EFPM_{Sand4}$	=	PM emission factor (lb/ton sand) for Line 4 Sand Handling and Waste Sand Handling (EU-N2A and EU-N2B) established during the most recent stack test. Until the test, 0.014 lb/ton sand emission factor shall be used.
P_{Sand4}	=	Monthly throughput of sand (tons/month) for Sand Handling and Waste Sand Handling on line 4.
$EFPM_{GRD4}$	=	PM emission factor (lb/ton metal) for Cells 1 and 2 established during the most recent stack test. Until the test, 0.02 lb/ton metal emission factor shall be used.
P_{GRD4}	=	Monthly throughput of metal (tons/month) for Grinding Operations for Six (6) Bench Grinders (Cells 1, 2, 3, 4, 11, and 12) for grinding metal from Line 4.
$EFPM_{Core}$	=	PM emission factor (lb/ton metal) for Core production facilities. 0.014 lb/ton metal emission factor shall be used.

(b) PM_{10}

PM emissions (tons/month)	=	{($EF10_{Charge}$ * H_{M4}) + ($EF10_{M4}$ * P_{M4}) + ($EF10_{M2}$ * P_{M3}) +($EF10_{DIC}$ * P_{DIC4}) + ($EF10_{PCSS4}$ * P_{PCSS4}) + ($EF10_{Sand4}$ * P_{Sand4}) + ($EF10_{GRD}$ * P_{GRD4}) + ($EF10_{Core}$ * P_{M4})} / 2000 lbs/ton
Where		
$EF10_{Charge}$	=	PM_{10} emission factor (lb/hr) for Plant 2 Indoor Charge Handling System (1000A). 0.12 lb/hr shall be used. Since the Plant 2 Indoor Charge Handling System is common to both the Plant 2 and Line 4, the same lb/hr emission rate is used (PM_{10} Limit in Condition D.3.1(b)).
H_{M4}	=	Monthly hours (hr/month) during which the Plant 2 Indoor Charge Handling System (1000A) operated to feed metals at line 4.
$EF10_{M4}$	=	PM_{10} emission factor (lb/ton of metal) for Induction Furnace (EU-N1) established during the most recent stack test. Until the test, 0.03 lb/ton emission factor shall be used.
P_{M4}	=	Monthly throughput of metal (tons/month) melted in Line 4 Induction Furnace (EU-N1)
$EF10_{M2}$	=	PM_{10} emission factor (lb/ton metal) for Plant 2 Induction Furnaces (1110) established during the most recent stack test. Until the test, 0.03 lb/ton metal emission factor shall be used.
P_{M3}	=	Monthly throughput of metal (tons/month) melted in the Induction Furnace (1110) and poured on Line 4.
$EF10_{DIC}$	=	PM_{10} emission factor (lb/ton metal) for the Plant 2 Ductile Iron Conversion process (1150) established during the most recent stack test. Until the test, 0.03 lb/ton metal emission factor shall be used.
P_{DIC4}	=	Monthly throughput of ductile iron (tons/month) poured on line 4.
$EF10_{PCSS4}$	=	PM_{10} emission factor (lb/ton metal) for Line 4 Pouring, Cooling, Shakeout and Shotblast (EU-N3, EU-N4, EU-N5, EU-N5A and EU-N6) established during the most recent stack test. Until the test, 0.13 lb/ton metal emission factor shall be used.
P_{PCSS4}	=	Monthly throughput of metal (tons/month) poured on line 4.
$EF10_{Sand4}$	=	PM_{10} emission factor (lb/ton sand) for Line 4 Sand Handling and Waste Sand Handling (EU-N2A and EU-N2B) established during the most recent stack test. Until the test, 0.014 lb/ton sand emission factor shall be used.
P_{Sand4}	=	Monthly throughput of sand (tons/month) for Sand Handling and Waste Sand Handling on line 4.
$EF10_{GRD4}$	=	PM_{10} emission factor (lb/ton metal) for Cells 1 and 2 established during the most recent stack test. Until the test, 0.02 lb/ton metal emission factor shall be used.
P_{GRD4}	=	Monthly throughput of metal (tons/month) for Grinding Operations for Six (6) Bench Grinders (Cells 1, 2, 3, 4, 11, and 12) for grinding metal from Line 4.
$EF10_{Core}$	=	PM_{10} emission factor (lb/ton metal) for Core production facilities. 0.014 lb/ton metal emission factor shall be used.

(c) $PM_{2.5}$

PM emissions (tons/month)	=	$\{(EF2.5_{Charge} * H_{M4}) + (EF2.5_{M4} * P_{M4}) + (EF2.5_{M2} * P_{M3}) + (EF2.5_{DIC} * P_{DIC4}) + (EF2.5_{PCSS4} * P_{PCSS4}) + (EF2.5_{Sand4} * P_{Sand4}) + (EF2.5_{GRD} * P_{GRD4}) + (EF2.5_{Core} * P_{M4})\} / 2000$ lbs/ton
Where		
$EF2.5_{Charge}$	=	$PM_{2.5}$ emission factor (lb/hr) for Plant 2 Indoor Charge Handling System (1000A). 0.072 lb/hr shall be used. It is assumed that $PM_{2.5}$ emissions from Plant 2 Indoor Charge Handling System are 60% of the PM_{10} emissions from Plant 2 Indoor Charge Handling System.
H_{M4}	=	Monthly hours (hr/month) during which the Plant 2 Indoor Charge Handling System (1000A) operated to feed metals at line 4.
$EF2.5_{M4}$	=	$PM_{2.5}$ emission factor (lb/ton of metal) for Induction Furnace (EU-N1) established during the most recent stack test. Until the test, 0.03 lb/ton emission factor shall be used.
P_{M4}	=	Monthly throughput of metal (tons/month) melted in Line 4 Induction Furnace (EU-N1)
$EF2.5_{M2}$	=	$PM_{2.5}$ emission factor (lb/ton metal) for Plant 2 Induction Furnaces (1110) established during the most recent stack test. Until the test, 0.03 lb/ton metal emission factor shall be used.
P_{M3}	=	Monthly throughput of metal (tons/month) melted in the Induction Furnace (1110) and poured on Line 4.
$EF2.5_{DIC}$	=	$PM_{2.5}$ emission factor (lb/ton metal) for the Plant 2 Ductile Iron Conversion process (1150) established during the most recent stack test. Until the test, 0.03 lb/ton metal emission factor shall be used.
P_{DIC4}	=	Monthly throughput of ductile iron (tons/month) poured on line 4.
$EF2.5_{PCSS4}$	=	$PM_{2.5}$ emission factor (lb/ton metal) for Line 4 Pouring, Cooling, Shakeout and Shotblast (EU-N3, EU-N4, EU-N5, EU-N5A and EU-N6) established during the most recent stack test. Until the test, 0.13 lb/ton metal emission factor shall be used.
P_{PCSS4}	=	Monthly throughput of metal (tons/month) poured on line 4.
$EF2.5_{Sand4}$	=	$PM_{2.5}$ emission factor (lb/ton sand) for Line 4 Sand Handling and Waste Sand Handling (EU-N2A and EU-N2B) established during the most recent stack test. Until the test, 0.014 (lb/ton sand) emission factor shall be used.
P_{Sand4}	=	Monthly throughput of sand (tons/month) for Sand Handling and Waste Sand Handling on line 4.
$EF2.5_{GRD4}$	=	$PM_{2.5}$ emission factor (lb/ton metal) for Cells 1 and 2 established during the most recent stack test. Until the test, 0.02 lb/ton metal emission factor shall be used.
P_{GRD4}	=	Monthly throughput of metal (tons/month) for Grinding Operations for Six (6) Bench Grinders (Cells 1, 2, 3, 4, 11, and 12) for grinding metal from Line 4.
$EF2.5_{Core}$	=	$PM_{2.5}$ emission factor (lb/ton metal) for Core production facilities. 0.014 lb/ton metal emission factor shall be used.

(c) Lead

PM emissions (tons/month)	=	{(EFLead $_{M4}$ * P_{M4}) + (EFLead $_{M2}$ * P_{M3}) (EFLead $_{PCSS4}$ * P_{PCSS4})} / 2000 lbs/ton
Where		
$EFLead_{M4}$	=	Lead emission factor (lb/ton of metal) for Induction Furnace (EU-N1) established during the most recent stack test. Until the test, 0.003 lb/ton emission factor shall be used.
P_{M4}	=	Monthly throughput of metal (tons/month) melted in Line 4 Induction Furnace (EU-N1)
$EFLead_{M2}$	=	Lead emission factor (lb/ton metal) for Plant 2 Induction Furnaces (1110) established during the most recent stack test. Until the test, 0.003 lb/ton metal emission factor shall be used.
P_{M3}	=	Monthly throughput of metal (tons/month) melted in the Induction Furnace (1110) and poured on Line 4.
$EFLead_{PCSS4}$	=	Lead emission factor (lb/ton metal) for Line 4 Pouring, Cooling, Shakeout and Shotblast (EU-N3, EU-N4, EU-N5, EU-N5A and EU-N6). 0.0002 lb/ton metal emission factor shall be used.

(e) VOC

VOC emissions (tons/month)	=	{($EFVOC_{PCSS}$ + $EFVOC_{Core}$) * P_M} / 2000 lbs/ton
Where		
$EFVOC_{PCS}$	=	VOC emission factor (lb/ton metal) for Line 4 Pouring, Cooling, Shakeout (EU-N3, EU-N4, EU-N5, and EU-N5A) established during most recent stack test. Until the test, 0.8 lb/ton metal emission factor shall be used.
$EFVOC_{Core}$	=	VOC emission factor lb/ton metal for Core production facilities. 1.72 lb/ton of core emission factor shall be used.
P_M	=	Monthly throughput of metal (tons/month) poured on line 4.

(f) CO

CO emissions (tons/month)	=	($EFCO_{PCSS4}$ * P_{PCSS4}) / 2000 lbs/ton
Where		
$EFCO_{PCS4}$	=	CO emission factor (lb/ton metal) for Line 4 Pouring, Cooling, Shakeout (EU-N3, EU-N4, EU-N5, and EU-N5A) established during most recent stack test. Until the test, 2.5 lb/ton metal emission factor shall be used.
P_{PCSS4}	=	Monthly throughput of metal (tons/month) poured on line 4.

D.4.6 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions D.4.2(a),(b),(c),(d), and D.4.3, the baghouses for particulate control shall be in operation and control emissions at all times the respective emission units are in operation.

(b) In order to comply with Conditions D.4.2(a),(b),(c),(d), and D.4.3, the Permittee shall install and operate continuous Bag leak detection systems (BLDSs) for the Baghouse DC-N1A and DC-N2.

The BLDS shall meet the following requirements:

(i) The BLDSs must be certified by the manufacturer to be capable of detecting particulate matter emissions.

(ii) The BLDS sensor must provide output of relative particulate matter loading.

(iii) The BLDS must be equipped with an alarm system that will alarm when an increase in relative particulate loading is detected over a preset level.

(iv) The BLDS shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.

(v) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.

(vi) In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such djustment follows a complete baghouse inspection, which demonstrates the baghouse is in good operating condition.

(vii) The bag detector must be installed downstream of the baghouses.

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

D.4.7 Mold Vent Ignition

In order to comply with Conditions D.4.1 and D.4.2(f), the Permittee shall comply with the following mold vent off gas ignition requirements for EU-N3:

(a) The Permittee shall operate the mold vent off gas ignition system for EU-N3 according to the mold vent ignition operation and maintenance plan approved by IDEM, OAQ.

(b) The Permittee shall prepare and submit the mold vent ignition operation and maintenance plan to the IDEM, OAQ for approval.

The operation and maintenance plan must include procedures for igniting gases from mold vents in pouring areas and pouring stations that use a sand mold system. The plan must contain the elements below:

Procedures for providing an ignition source to mold vents of sand mold systems in each pouring area and pouring station unless the Permittee determine the mold vent gases either are not ignitable, ignite automatically, or cannot be ignited due to accessibility or safety issues. The Permittee shall document and maintain records of this determination. The determination of ignitability, accessibility, and safety may encompass multiple casting patterns provided the castings utilize similar sand-to-metal ratios, binder formulations, and coating materials. The determination of ignitability must be based on observations of the mold vents within 5 minutes of pouring, and the flame must be present for at least 15 seconds for the mold vent to be considered ignited. For the purpose of this determination:

(i) Mold vents that ignite more than 75 percent of the time without the presence of an auxiliary ignition source are considered to ignite automatically; and

(ii) Mold vents that do not ignite automatically and cannot be ignited in the presence of an auxiliary ignition source more than 25 percent of the time are considered to be not ignitable.

(C) The Permittee shall maintain a current copy of the mold vent ignition operation and maintenance plan onsite approved by IDEM, OAQ and make available for inspection upon request.

D.4.8 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to show compliance with Conditions D.4.2 and D.4.3, the Permittee shall perform the following testing utilizing methods as approved by the Commissioner:

(1) PM, PM_{10}, $PM_{2.5}$ and Lead testing for the baghouse DC-N1A (Stack S-N1) controlling the Line 4 Induction Furnace EU-N1.

(2) PM, PM_{10}, $PM_{2.5}$ and Lead testing for the baghouse controlling the Plant 2 Induction Furnace (1110) exhausting to stack No. 6010.

(3) PM, $PM_{10,}$ and $PM_{2.5}$ testing for the baghouse DC-N1B (Stack S-N1) controlling the Line 4 Sand Handling and Return Sand Handling System (EU-N2A and EU-N2B).

(4) PM, PM_{10} and $PM_{2.5}$ testing for the baghouse DC-N2 (Stack S-N2) controlling the following Line 4 operations: Pouring and Cooling (EU-N3 and EU-N4), Casting Shakeout (EU-N5) Bad Heat Shakeout (EU-N5A) and Shot Blast Unit (EU-N6).

(5) CO testing for the Stack S-N2 for the Line 4 Pouring, Cooling and Casting Shakeout (EU-N3 and EU-N4, EU-N5 and EU-N5A).

(6) PM, PM_{10} and $PM_{2.5}$ testing for the baghouse controlling the Plant 2 Ductile Iron Conversion Station (1150) exhausting to stack No. 6010.

PM_{10} and $PM_{2.5}$ includes filterable and condensable PM.

(b) In order to show compliance with Conditions D.4.1, D.4.2 and D.4.3(e), the Permittee shall perform VOC testing for the Pouring Station (EU-N3), Cooling Line (EU-N4) and Casting Shakeout System (EU-N5 and EU-N5A) utilizing methods as approved by the Commissioner.

The tests required in (a) and (b) above shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with 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 2-7-5(1)] [326 IAC 2-7-6(1)]

D.4.9 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the indoor and the stack exhausts for Baghouse DC-N1B (Stack S-N1) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for PM, PM_{10}, and/or $PM_{2.5}$ for the Sand handling system (EU-N2A) and Return sand handling system (EU-N2B).

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permitee's obligation with regard to the reasonable response steps required by this condition. Failure to take reasonable response steps shall be considered a deviation from this permit.

D.4.10 Parametric Monitoring [40 CFR 64]

(a) The Permittee shall record the pressure drop across baghouses DC-N1A, DC-N1B, and DC-N2 at least once per day when the units are in operation. When for any one reading, the pressure drop across the baghouse or filter is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 to 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 Permitee'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 reasonable response steps shall be considered a deviation from this permit.

The instruments 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

(b) An inspection shall be performed each calendar quarter of the Baghouse DC-N1A and DC-N2. All defective bags shall be replaced.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for PM, PM_{10}, and/or $PM_{2.5}$ for the Sand handling system (EU-N2A), Return sand handling system (EU-N2B), Pouring station (EU-N3), Casting shakeout system (EU-N5), Bad heat shakeout system (EU-N5A), and Shot blast unit (EU-N6).

D.4.11 Broken or Failed Baghouse 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 baghouses pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks or dust traces.

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

D.4.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.4.1, the Permittee shall maintain monthly records of the following:

(1) Hours during which the Plant 2 Indoor Charge Handling System (1000A) operated to feed metals at line 4;
(2) Throughput of metal (tons) melted in Line 4 Induction Furnace (EU-N1);
(3) Throughput of metal (tons) melted in the Induction Furnace (1110) and poured on Line 4;
(4) Throughput of metal (tons) poured on line 4;
(5) Throughput of sand (tons) for Sand Handling and Waste Sand Handling on line 4;
(6) Throughput of metal (tons) for Grinding Operations for Six (6) Bench Grinders (Cells 1, 2, 3, 4, 11, and 12) for grinding metal from Line 4;
(7) PM, PM_{10}, $PM_{2.5}$, Lead, VOC, and CO emissions determined using the equations specified in Condition D.4.5.

(b) To document the compliance status with Conditions D.4.7, the Permittee shall maintain a current copy of the mold vent ignition operation and maintenance plan onsite approved by IDEM, OAQ and make available for inspection upon request.

(d) To document the compliance status with Condition D.4.8, the Permittee shall maintain a daily record of visible emission notations of the stack exhausts from Stack No. S-N2. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(e) To document the compliance status with Condition D.4.9(a), the Permittee shall maintain a daily record of the pressure drop across each of the baghouses. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day);

(e) To document the compliance status with Condition D.4.9(b), the Permittee shall maintain records of the results of the inspections required under Condition 5.9(b).

(f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.4.13 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.4.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Units

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:

(1) Two (2) natural gas-fired boilers, identified as P40 and P41, constructed in 1988, with a maximum heat capacity of 0.9 and 1.2 million Btu per hour, respectively;

(b) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6: maintenance parts cleaner using mineral spirits solvent that is 100% recycled, with a maximum throughput of 120 gallons per 12 months;

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

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

D.5.1 Particulate [326 IAC 6-2-4]

Pursuant 326 IAC 6-2-4(a), particulate emissions from each of the boilers, identified as P40 and P41, shall not exceed 0.6 pound per million Btu heat input.

D.5.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2(a), the owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(a) Equip the degreaser with a cover.

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

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

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

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

(f) Store waste solvent only in closed containers.

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

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Core production facilities, for producing cores for all three ductile iron foundry lines (Plant 1, Plant 2, Plant 2, and Line 4), consisting of:

(1) Three (3) Core Sand Bins, constructed in 1988, and using a dust collector for particulate control, identified as DC-9, and exhausting to stack No. 9;

(2) Four (4) Isocure Cold Box Core Machines, identified as P4, P5, P6, constructed in 1988, and P7, constructed in 1994, each with a maximum capacity of processing 0.5 ton of core sand per hour, 8.0 pounds of resin per ton of core sand per hour, and 1.12 pounds of DMIPA catalyst per ton of core sand, using no control, and exhausting to stacks No. 10A and 10B.

Under 40 CFR 63, Subpart EEEEE (5E), the core production facilities are considered an affected source.

Plant 1

(b) One (1) Ductile Iron Foundry Line, identified as Plant 1, consisting of the following:

(1) Melting and Finishing operations, all units constructed in 1988 (unless otherwise specified), consisting of:

(A) One (1) Indoor Charge Handling System, with a total maximum capacity of 20 tons of metal per hour;

Note: The maximum throughput of metal for the Charge Handling System is limited to 20 tons per hour by the Power Control System.

(B) One (1) Melting System, identified as P8, with a total maximum capacity of 20 tons of metal per hour, consisting of three (3) Electric Induction Furnaces, identified as P1, P2, and P3, each with a maximum throughput capacity of 10 tons of metal per hour, using two (2) baghouses for particulate control, identified as DC-3A and DC-3B, and exhausting to common stack No. 3;

Note: The maximum throughput of metal for the Melting System is limited to 20 tons per hour by the maximum throughput from the Indoor Charge Handling system.

(C) One (1) Holding system consisting of the following equipment:

(i) Two (2) Electric Holding Furnaces, identified as P9, each with a holding capacity of 50 tons and a total maximum throughput capacity of 100 tons of metal per hour, using no control, and exhausting indoors;

(ii) Four (4) natural gas-fired Ladle Heaters, collectively identified as P10, all constructed in 2004, using no control, and exhausting indoors:

(a) Two (2) of which are metal treatment ladle heaters,

each with a maximum heat input capacity of 1.0 MMBtu/hr, and

(b) Two (2) of which are pouring ladle heaters, each with a maximum heat input capacity of 0.4 MMBtu/hr,

(D) One (1) Inoculation system, identified as P11, replaced in 2004, consisting of two (2) metal treatment ladles, each with a maximum throughput capacity of 10 tons of metal per hour, each ladle is using a baghouse (DC-3A and DC-3B) for particulate control, and exhausting to a common stack No. 3; and

Note: Baghouse DC-3A is a common control for the Melting System and Inoculation system.

(E) Seven (7) grinders, identified as Grinders 3 and 4, constructed in 1988, and Grinders 5 through 9, constructed in 2009, with a total maximum capacity of 12 tons of metal per hour, using four (4) dust collectors for particulate control, and exhausting inside the building.

Note: Grinders 3, 4, and 5 share a common dust collector, while Grinders 6 to 9 each has its own dust collector.

(2) One (1) Casting Line, identified as Casting Line 2, constructed in 2004, consisting of the following equipment:

(A) One (1) Sand System, consisting of seven (7) units, identified as P32B, P33B, P34B, P35B, P36B, P37B and P39B, with a total maximum capacity of 70 tons of sand per hour, using baghouse BH6400 for particulate control, and exhausting to stack No. 6400;

(B) One (1) Pouring station, identified as P13B, with a maximum capacity of 15 tons of metal poured per hour, using baghouse DC-3B for particulate control, and exhausting to stack No. 3;

Note: Baghouse DC-3B is a common control for the Melting System, Inoculation system, and Pouring Station.

(C) One (1) Cooling line, identified as P14B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control, and exhausting to stack No. 6200;

(D) One (1) Shakeout unit, identified as P16B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control and an advanced oxidation system for VOC control, and exhausting to stack No. 6200;

(E) One (1) Bad Heat Shakeout unit controlled by baghouse DC-5, and exhausting to stack No. 5;

Note: An advanced oxidation system is used in conjunction with Plant 1 casting line to reduce VOC emissions from the Pouring station, Cooling line, and Shakeout units through acoustic sonication and the incorporation of ozone and hydrogen peroxide in the water supply to the muller.

(F) Casting Conveyors and Desprue operations, identified as P17B, P18B, P19B, P20B, P21B and P22B, with a maximum capacity of 15 tons of metal per hour, using three (3) baghouses for particulate control, DC-7 and DC-8B, both exhausting inside the building, and BH6200, exhausting to stack No. 6200; and

Note: Baghouse BH6200 is common control for the Cooling line, Shakeout unit, Casting Conveyors, and Desprue operations.

(G) Three (3) Shotblast units, identified as P40, P41 and P42, each with a maximum capacity of 5.3 tons of metal per hour and a total maximum capacity of 9.0 tons of metal per hour, all shotblasting units using baghouse DC-8B for particulate control, and exhausting inside the building.

Note: Baghouse DC-8B is common control for the Casting Conveyors, Desprue operations, and Shotblast units.

(3) One (1) Shotblast unit, identified as Wheelabrator MeshBelt Blast, constructed in 2001, with a maximum capacity of 11.0 tons of metal per hour, using baghouse DC-13 for particulate control, and exhausting internally.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 1 is considered an affected source.

Plant 2

(c) One (1) Ductile Iron Foundry Line, all units constructed in 1997 (unless otherwise specified), identified as Plant 2, consisting of the following:

(1) One (1) Indoor Charge Handling system, identified as 1000A, modified in 2013, with a nominal capacity of 20 tons of metal per hour, using no control, and exhausting indoors;

Note: This Indoor Charge Handling system (1000A) is common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(2) One (1) Ductile Iron Conversion Station, identified as 1150, modified in 2013, with a nominal capacity of 25 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: This Ductile Iron Conversion Station (1150) is common for the Ductile Iron Foundry Lines identified as Plant 2 and Line 4.

(3) One (1) Melting System, identified as 1110, modified in 2013, consisting of two (2) Electric Induction Furnaces, each with a nominal capacity of 10 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: These electric induction furnaces (1110) are common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(4) One (1) Electric Holding Furnace, with a maximum capacity of 10 tons of metal per hour, using no control, and exhausting indoors

(5) Two (2) natural gas-fired Ladle Heaters, identified as 6600 and 6610, each

with a maximum heat input rate of 2.0 MMBtu per hour, using no control, and exhausting indoors;

(6) One (1) Pouring Station, identified as 2000, modified in 2013 to increase maximum throughput, with a nominal capacity of 20 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

(7) One (1) Mold Machine, identified as 2010, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: Baghouse BH6010 is a common control for the Ductile Iron Conversion Station (1150), Electric Induction Furnaces (1110), Pouring Station (2000), and Mold Machine (2010)

(8) One (1) Casting Conveyor System and one (1) Cooling Conveyor System, identified as 2015 and 2020, respectively, modified in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6020 and BH6030 for particulate control, and exhausting to stack No. 6020, 6030A and 6030B;

(9) One (1) Casting Shakeout System, identified as 3010, replaced in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6030 for particulate control, and exhausting to stack No. 6030A and 6030B;

(10) One (1) Sand and Waste Sand Handling System, identified as 4000, 4140 and 5000, with a maximum capacity of 70 tons of sand per hour, using baghouses BH6020 and BH6040 for particulate control, and exhausting to stack No. 6020 and 6040;

Note: Baghouse BH6020 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), and Sand and Waste Sand Handling System (4000, 4140, 5000).

(11) One (1) Shotblast unit, identified as Final Blast 3090, with a maximum capacity of 10 tons of metal per hour, using baghouse BH6030, and exhausting to stack No. 6030A and 6030B; and

Note: Baghouse BH6030 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), Casting Shakeout System (3010), and Final Blast 3090.

(12) One (1) Finishing operation consisting of trim presses, identified as 8000, with a maximum capacity of 5.5 tons of metal per hour, using no control, and exhausting indoors.

(13) Six (6) Bench Grinders, modified in 2013, with a total nominal capacity of 5.5 tons of metal per hour, exhausting inside/outside the building, and consisting of the following:

(A) Cells 1 and 2, using fabric filter AAF for particulate control;

(B) Cell 3, using fabric filter DC#3 for particulate control;

(C) Cell 4, controlled by fabric filter DC#4 for particulate control;

(D) Cell 11, controlled by fabric filter DC#1 for particulate control; and

(E) Cell 12 controlled by Aercology #1.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2 is considered an affected source.

Line 4 in Plant 2

(d) One (1) Ductile Iron Foundry Line, all units constructed in 2013 (unless otherwise specified), identified as Plant 2, Line 4, consisting of the following:

(1) One (1) Electric Induction Furnace, identified as EU-N1, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N1A for particulate control, and exhausting to Stack S-N1.

(2) One (1) Sand Handling System, identified as EU-N2A, and one (1) Return Sand Handling System, identified as EU-N2B, with a nominal capacity of 75 tons of sand per hour, both systems using Baghouse DC-N1B for particulate control, exhausting to Stack S-N1.

(3) One (1) Pouring Station, identified as EU-N3, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and mold vent ignition system for VOC control, and exhausting to Stack S-N2.

(4) One (1) Cooling Line, identified as EU-N4, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(5) One (1) Casting Shakeout System, identified as EU-N5, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(6) One (1) Bad Heat Shakeout System, identified as EU-N5A, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(7) One (1) Shot Blast Unit, identified as EU-N6, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and exhausting to Stack S-N2.

Note: Baghouse DC-N2 is common control for the Pouring Station (EU-N3), Cooling Line (EU-N4), Casting Shakeout system (EU-N5), Bad Heat Shakeout system (EU-N5A) and Shot Blast unit (EU-N6).

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2, Line 4 is considered an affected source.

(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 [40 CFR Part 63]

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

(a) Pursuant to 40 CFR Part 63.7760, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 1 of 40 CFR Part 63, Subpart EEEEE (5E).

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.1.2 NESHAP for Iron and Steel Foundries [326 IAC 20-92] [40 CFR Part 63, Subpart EEEEE (5E)]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart EEEEE (5E), which are incorporated by reference as 326 IAC 20-92, for the facilities listed in Section E.1. The full text of Subpart EEEEE (5E) may be found in Attachment A to this permit.

(a) 40 CFR 63.7680
(b) 40 CFR 63.7681
(c) 40 CFR 63.7682
(d) 40 CFR 63.7683(a),(b),(f)
(e) 40 CFR 63.7690(a)(1)(i),(5)(i),(7)
(f) 40 CFR 63.7700(a),(b)
(g) 40 CFR 63.7710(a),(b)(1),(3) through (6)
(h) 40 CFR 63.7720
(i) 40 CFR 63.7730(a),(b)
(j) 40 CFR 63.7731
(k) 40 CFR 63.7732(a),(b)(1),(2),(4);(c)(1),(2),(4);(d);(h)
(l) 40 CFR 63.7733(a),(e),(f)
(m) 40 CFR 63.7734(a)(1)(i),(5)(i),(7);(b)(1)
(n) 40 CFR 63.7735(a)
(o) 40 CFR 63.7736(c), (d)
(p) 40 CFR 63.7740(b)
(q) 40 CFR 63.7741(b)
(r) 40 CFR 63.7742
(s) 40 CFR 63.7743(a)(1)(i),(5)(i),(7),(12);(c)
(t) 40 CFR 63.7744(a)
(u) 40 CFR 63.7745
(v) 40 CFR 63.7746
(w) 40 CFR 63.7750(a),(b),(d),(e)
(x) 40 CFR 63.7751
(y) 40 CFR 63.7752(a),(c)
(z) 40 CFR 63.7753
(aa) 40 CFR 63.7760
(bb) 40 CFR 63.7761
(cc) 40 CFR 63.7765
(dd) Table 1 to Subpart EEEEE of Part 63

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(j) One (1) 469 hp diesel-fired emergency generator located in Plant 2, Line 4, identified as EG3, and approved for construction in 2013.

Under 40 CFR 63, Subpart ZZZZ, EG3 is considered a new stationary RICE.

Under 40 CFR 60, Subpart IIII, EG3 is considered an affected source.

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

Standards of Performance for New Stationary Sources (NSPS) Requirements [40 CFR Part 60]

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR Part 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR Part 60, Subpart IIII (4I).

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports 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

E.2.2 NSPS for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12-1] [40 CFR Part 60, Subpart IIII (4I)]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart IIII (4I), which are incorporated by reference as 326 IAC 12, for the facilities listed in Section E.3. The full text of Subpart IIII (4I) may be found in Attachment B to this permit.

(a) 40 CFR 60.4200(a)(2)
(b) 40 CFR 60.4205(b)
(c) 40 CFR 60.4206
(d) 40 CFR 60.4207(b)
(e) 40 CFR 60.4209(a)
(f) 40 CFR 60.4211(a), (c), and (f)
(g) 40 CFR 60.4214(b)
(h) 40 CFR 60.4218
(i) 40 CFR 60.4219

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(h) One (1) 429 hp diesel-fired emergency generator located in Plant 1, identified as EG1, and installed in 1989;

Under 40 CFR 63, Subpart ZZZZ, EG1 is considered an existing stationary RICE.

(i) One (1) 469 hp diesel-fired emergency generator located in Plant 2, identified as EG2, and installed in 1998; and

Under 40 CFR 63, Subpart ZZZZ, EG2 is considered an existing stationary RICE.

(j) One (1) 469 hp diesel-fired emergency generator located in Plant 2, Line 4, identified as EG3, and approved for construction in 2013.

Under 40 CFR 63, Subpart ZZZZ, EG3 is considered a new stationary RICE.

Under 40 CFR 60, Subpart IIII, EG3 is considered an affected source.

(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 [40 CFR Part 63]

E.3.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR Part 63.6665, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 8 of 40 CFR Part 63, Subpart ZZZZ (4Z).

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.3.2 NESHAP for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-82] [40 CFR Part 63, Subpart ZZZZ (4Z)]

(a) The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (4Z) for EG1 and EG2, which are incorporated by reference as 326 IAC 20-82, for the facilities listed in Section E.4. The full text of Subpart ZZZZ (4Z) may be found in Attachment C to this permit.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(i)
(4) 40 CFR 63.6595(a)(1)
(5) 40 CFR 63.6602
(6) 40 CFR 63.6605

(7) 40 CFR 63.6625(e)(2)
(8) 40 CFR 63.6640(f)(1)
(9) 40 CFR 63.6645(a)(5)
(10) 40 CFR 63.6655(e)(2)
(11) 40 CFR 63.6660
(12) 40 CFR 63.6665
(13) 40 CFR 63.6670
(14) 40 CFR 63.6675

(b) The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (4Z) for EG3, which are incorporated by reference as 326 IAC 20-82, for the facilities listed in Section E.4. The full text of Subpart ZZZZ (4Z) may be found in Attachment C to this permit.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(c)(6)

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

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011

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

Please check what document is being certified:

□ Annual Compliance Certification Letter

□ Test Result (specify)

□ Report (specify)

□ Notification (specify)

□ Affidavit (specify)

□ Other (specify)

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

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011

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

□ This is an emergency as defined in 326 IAC 2-7-1(12) • The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and • The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

Part 70 Quarterly Report

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011
Facility: Plant 1 Melting, Finishing, and Casting operations
Parameter: Metal throughput
Limit: 79,000 tons per twelve (12) consecutive months

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011
Facility: Plant 1 Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)
Parameter: Sand throughput
Limit: 368,667 tons per twelve (12) consecutive months

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011
Facility: Plant 2 Ductile Iron Foundry Line
Parameter: Metal throughput
Limit: 61,500 tons per twelve (12) consecutive months

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011
Facility: Plant 2 Sand and Waste Sand Handling System (4000, 4140 and 5000)
Parameter: Sand throughput
Limit: 430,500 tons per twelve (12) consecutive months

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011
Facility: Plant 2 Finishing operation (8000) and six (6) bench grinders (Cells, 1, 2, 3, 4, 11, and 12)
Parameter: Metal throughput
Limit: 430,500 tons per twelve (12) consecutive months

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011
Facility: Plant 2, Line 4 operations
Parameter: PM, PM_{10}, $PM_{2.5}$, Lead, CO, and VOC emissions
Limit: Limits specified in Condition D.4.2

QUARTER : YEAR:

Month	Pollutant	Column 1	Column 2	Column 1 + Column 2
		Emissions this Month (tons/year)	Emissions Previous 11 Months (tons/year)	Emissions for 12 Month Total (tons/year)
Month 1	PM			
	PM_{10}			
	$PM_{2.5}$			
	Lead			
	CO			
	VOC			
Month 2	PM			
	PM_{10}			
	$PM_{2.5}$			
	Lead			
	CO			
	VOC			
Month 3	PM			
	PM_{10}			
	$PM_{2.5}$			
	Lead			
	CO			
	VOC			

□ No deviation occurred in this quarter.

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

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

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

Source Name: INTAT Precision, Inc.
Source Address: 2148 State Road 3 North, Rushville, Indiana 46173
Part 70 Permit No.: T139-34150-00011

Months: _____ to _____ Year: _____

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

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A

Part 70 Operating Permit No: T139-34150-00011

[Downloaded from the eCFR on August 21, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries

Source: 69 FR 21923, Apr. 22, 2004, unless otherwise noted.

What this Subpart Covers

§ 63.7680 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for iron and steel foundries. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart.

§ 63.7681 Am I subject to this subpart?

You are subject to this subpart if you own or operate an iron and steel foundry that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. Your iron and steel foundry is a major source of HAP for purposes of this subpart if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year or if it is located at a facility that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year as defined in § 63.2.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]

§ 63.7682 What parts of my foundry does this subpart cover?

(a) The affected source is each new or existing iron and steel foundry.

(b) This subpart covers emissions from metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines, automated shakeout lines, and mold and core making lines. This subpart also covers fugitive emissions from foundry operations.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source before December 23, 2002.

(d) An affected source is new if you commenced construction or reconstruction of the affected source on or after December 23, 2002. An affected source is reconstructed if it meets the definition of “reconstruction” in § 63.2.

§ 63.7683 When do I have to comply with this subpart?

(a) Except as specified in paragraph (b) of this section, if you have an existing affected source, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that

applies to you no later than April 23, 2007. Major source status for existing affected sources must be determined no later than April 23, 2007.

(b) If you have an existing affected source, you must comply with the work practice standards in § 63.7700(b) or (c), as applicable, no later than April 22, 2005.

(c) If you have a new affected source for which the initial startup date is on or before April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by April 22, 2004.

(d) If you have a new affected source for which the initial startup date is after April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(e) If your iron and steel foundry is an area source that becomes a major source of HAP, you must meet the requirements of § 63.6(c)(5).

(f) You must meet the notification and schedule requirements in § 63.7750. Note that several of these notifications must be submitted before the compliance date for your affected source.

Emissions Limitations

§ 63.7690 What emissions limitations must I meet?

(a) You must meet the emissions limits or standards in paragraphs (a)(1) through (11) of this section that apply to you. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for particulate matter (PM) in paragraph (a)(1)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(1)(ii) of this section:

(i) 0.005 grains of PM per dry standard cubic foot (gr/dscf), or

(ii) 0.0004 gr/dscf of total metal HAP.

(2) For each cupola metal melting furnace at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(2)(i) or (ii) of this section or, alternatively the limit for total metal HAP in paragraph (a)(2)(iii) or (iv) of this section:

(i) 0.006 gr/dscf of PM; or

(ii) 0.10 pound of PM per ton (lb/ton) of metal charged, or

(iii) 0.0005 gr/dscf of total metal HAP; or

(iv) 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(3)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(3)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(4)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(4)(ii) of this section:

(i) 0.001 gr/dscf of PM, or

(ii) 0.00008 gr/dscf of total metal HAP.

(5) For each pouring station at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(5)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(5)(ii) of this section:

(i) 0.010 gr/dscf of PM, or

(ii) 0.0008 gr/dscf of total metal HAP.

(6) For each pouring area or pouring station at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(6)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(6)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, you must not discharge any fugitive emissions to the atmosphere from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, you must not discharge emissions of volatile organic hazardous air pollutants (VOHAP) through a conveyance to the atmosphere that exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen.

(9) As an alternative to the work practice standard in § 63.7700(e) for a scrap preheater at an existing iron and steel foundry or in § 63.7700(f) for a scrap preheater at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed a flow-weighted average of 20 ppmv.

(11) For each triethylamine (TEA) cold box mold or core making line at a new or existing iron and steel foundry, you must meet either the emissions limit in paragraph (a)(11)(i) of this section or, alternatively the emissions standard in paragraph (a)(11)(ii) of this section:

(i) You must not discharge emissions of TEA through a conveyance to the atmosphere that exceed 1 ppmv, as determined according to the performance test procedures in § 63.7732(g); or

(ii) You must reduce emissions of TEA from each TEA cold box mold or core making line by at least 99 percent, as determined according to the performance test procedures in § 63.7732(g).

(b) You must meet each operating limit in paragraphs (b)(1) through (5) of this section that applies to you.

(1) You must install, operate, and maintain a capture and collection system for all emissions sources subject to an emissions limit for VOHAP or TEA in paragraphs (a)(8) through (11) of this section.

(i) Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(ii) You must operate each capture system at or above the lowest value or settings established as operating limits in your operation and maintenance plan.

(2) You must operate each wet scrubber applied to emissions from a metal melting furnace, scrap preheater, pouring area, or pouring station subject to an emissions limit for PM or total metal HAP in paragraphs (a)(1) through (6) of this section such that the 3-hour average pressure drop and scrubber water flow rate does not fall below the minimum levels established during the initial or subsequent performance test.

(3) You must operate each combustion device applied to emissions from a cupola metal melting furnace subject to the emissions limit for VOHAP in paragraph (a)(8) of this section, such that the 15-minute average combustion zone temperature does not fall below 1,300 degrees Fahrenheit ((°deg;F). Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.

(4) You must operate each combustion device applied to emissions from a scrap preheater subject to the emissions limit for VOHAP in paragraph (a)(9) of this section or from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section, such that the 3-hour average combustion zone temperature does not fall below the minimum level established during the initial or subsequent performance test.

(5) You must operate each wet acid scrubber applied to emissions from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section such that:

(i) The 3-hour average scrubbing liquid flow rate does not fall below the minimum level established during the initial or subsequent performance test; and

(ii) The 3-hour average pH of the scrubber blowdown, as measured by a continuous parameter monitoring system (CPMS), does not exceed 4.5 or the pH of the scrubber blowdown, as measured once every 8 hours during process operations, does not exceed 4.5.

(c) If you use a control device other than a baghouse, wet scrubber, wet acid scrubber, or combustion device, you must prepare and submit a monitoring plan containing the information listed in paragraphs (c)(1) through (5) of this section. The monitoring plan is subject to approval by the Administrator.

(1) A description of the device;

(2) Test results collected in accordance with § 63.7732 verifying the performance of the device for reducing emissions of PM, total metal HAP, VOHAP, or TEA to the levels required by this subpart;

(3) A copy of the operation and maintenance plan required by § 63.7710(b);

(4) A list of appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limitation(s); and

(5) Operating parameter limits based on monitoring data collected during the performance test.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]

Work Practice Standards

§ 63.7700 What work practice standards must I meet?

(a) For each segregated scrap storage area, bin or pile, you must either comply with the certification requirements in paragraph (b) of this section, or prepare and implement a plan for the selection and inspection of scrap according to the requirements in paragraph (c) of this section. You may have certain scrap subject to paragraph (b) of this section and other scrap subject to paragraph (c) of this section at your facility provided the scrap remains segregated until charge make-up.

(b) You must prepare and operate at all times according to a written certification that the foundry purchases and uses only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids. For the purpose of this paragraph (b), “free organic liquids” is defined as material that fails the paint filter test by EPA Method 9095A, “Paint Filter Liquids Test” (Revision 1, December 1996), as published in EPA Publication SW-846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (incorporated by reference—see § 63.14). Any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed and/or cleaned to the extent practicable such that the materials do not include lead components, mercury switches, chlorinated plastics, or free organic liquids can be included in this certification.

(c) You must prepare and operate at all times according to a written plan for the selection and inspection of iron and steel scrap to minimize, to the extent practicable, the amount of organics and HAP metals in the charge materials used by the iron and steel foundry. This scrap selection and inspection plan is subject to approval by the Administrator. You must keep a copy of the plan onsite and readily available to all plant personnel with materials acquisition or inspection duties. You must provide a copy of the material specifications to each of your scrap vendors. Each plan must include the information specified in paragraphs (c)(1) through (3) of this section.

(1) A materials acquisition program to limit organic contaminants according to the requirements in paragraph (c)(1)(i) or (ii) of this section, as applicable.

(i) For scrap charged to a scrap preheater, electric arc metal melting furnace, or electric induction metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, organic liquids, and a program to ensure the scrap materials are drained of free liquids; or

(ii) For scrap charged to a cupola metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastic, and a program to ensure the scrap materials are drained of free liquids.

(2) A materials acquisition program specifying that the scrap supplier remove accessible mercury switches from the trunks and hoods of any automotive bodies contained in the scrap and remove accessible lead components such as batteries and wheel weights. You must either obtain and maintain onsite a copy of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable, or document your attempts to obtain a copy of these procedures from the scrap suppliers servicing your area.

(3) Procedures for visual inspection of a representative portion, but not less than 10 percent, of all incoming scrap shipments to ensure the materials meet the specifications.

(i) The inspection procedures must identify the location(s) where inspections are to be performed for each type of shipment. Inspections may be performed at the scrap supplier's facility. The selected location(s) must provide a reasonable vantage point, considering worker safety, for visual inspection.

(ii) The inspection procedures must include recordkeeping requirements that document each visual inspection and the results.

(iii) The inspection procedures must include provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and limiting purchases from vendors whose shipments fail to meet specifications for more than three inspections in one calendar year.

(iv) If the inspections are performed at the scrap supplier's facility, the inspection procedures must include an explanation of how the periodic inspections ensure that not less than 10 percent of scrap purchased from each supplier is subject to inspection.

(d) For each furan warm box mold or core making line in a new or existing iron and steel foundry, you must use a binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation as determined by the Material Safety Data Sheet. This requirement does not apply to the resin portion of the binder system.

(e) For each scrap preheater at an existing iron and steel foundry, you must meet either the requirement in paragraph (e)(1) or (2) of this section. As an alternative to the requirement in paragraph (e)(1) or (2) of this section, you must meet the VOHAP emissions limit in § 63.7690(a)(9).

(1) You must operate and maintain a gas-fired preheater where the flame directly contacts the scrap charged; or

(2) You must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section.

(f) For each scrap preheater at a new iron and steel foundry, you must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section. As an alternative to this requirement, you must meet the VOHAP emissions limit in § 63.7690(a)(9).

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7218, Feb. 7, 2008]

Operation and Maintenance Requirements

§ 63.7710 What are my operation and maintenance requirements?

(a) As required by § 63.6(e)(1)(i), you must always operate and maintain your iron and steel foundry, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device for an emissions source subject to a PM, metal HAP, TEA, or VOHAP emissions limit in § 63.7690(a). Your operation and maintenance plan also must include procedures for igniting gases from mold vents in pouring areas and pouring stations that use a sand mold system. This operation and maintenance plan is subject to approval by the Administrator. Each plan must contain the elements described in paragraphs (b)(1) through (6) of this section.

(1) Monthly inspections of the equipment that is important to the performance of the total capture system (*i.e.,* pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.,* presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan must also include requirements to repair the defect or deficiency as soon as practicable.

(2) Operating limits for each capture system for an emissions source subject to an emissions limit or standard for VOHAP or TEA in § 63.7690(a)(8) through (11). You must establish the operating according to the requirements in paragraphs (b)(2)(i) through (iii) of this section.

(i) Select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you must use appropriate operating limit parameters that indicate the level of the ventilation draft and damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include, but are not limited to: volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage, or static pressure. Any parameter for damper position setting may be used that indicates the duct damper position related to the fully open setting.

(ii) For each operating limit parameter selected in paragraph (b)(2)(i) of this section, designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate (*i.e.,* the operating limits with one furnace melting, two melting, as applicable to your plant).

(iii) Include documentation in your plan to support your selection of the operating limits established for your capture system. This documentation must include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of § 63.7740(a), and the data used to set the value or setting for the parameter for each of your process configurations.

(3) Preventative maintenance plan for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(4) A site-specific monitoring plan for each bag leak detection system. For each bag leak detection system that operates on the triboelectric effect, the monitoring plan must be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document “Fabric Filter Bag Leak Detection Guidance” (EPA-454/R-98-015). This baghouse monitoring plan is subject to approval by the Administrator. The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all of the items identified in paragraphs (b)(4)(i) through (v) of this section.

(i) Installation of the bag leak detection system.

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

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

(iv) 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.

(5) Corrective action plan for each baghouse. The plan must include the requirement that, in the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions taken may include, but are not limited to:

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

(ii) Sealing off defective bags or filter media.

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

(iv) Sealing off a defective baghouse compartment.

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

(vi) Making process changes.

(vii) Shutting down the process producing the PM emissions.

(6) Procedures for providing an ignition source to mold vents of sand mold systems in each pouring area and pouring station unless you determine the mold vent gases either are not ignitable, ignite automatically, or cannot be ignited

due to accessibility or safety issues. You must document and maintain records of this determination. The determination of ignitability, accessibility, and safety may encompass multiple casting patterns provided the castings utilize similar sand-to-metal ratios, binder formulations, and coating materials. The determination of ignitability must be based on observations of the mold vents within 5 minutes of pouring, and the flame must be present for at least 15 seconds for the mold vent to be considered ignited. For the purpose of this determination:

(i) Mold vents that ignite more than 75 percent of the time without the presence of an auxiliary ignition source are considered to ignite automatically; and

(ii) Mold vents that do not ignite automatically and cannot be ignited in the presence of an auxiliary ignition source more than 25 percent of the time are considered to be not ignitable.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]

General Compliance Requirements

§ 63.7720 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, or malfunction.

(b) During the period between the compliance date specified for your iron and steel foundry in § 63.7683 and the date when applicable operating limits have been established during the initial performance test, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3). The startup, shutdown, and malfunction plan also must specify what constitutes a shutdown of a cupola and how to determine that operating conditions are normal following startup of a cupola.

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

Initial Compliance Requirements

§ 63.7730 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) As required by § 63.7(a)(2), you must conduct a performance test no later than 180 calendar days after the compliance date that is specified in § 63.7683 for your iron and steel foundry to demonstrate initial compliance with each emissions limitation in § 63.7690 that applies to you.

(b) For each work practice standard in § 63.7700 and each operation and maintenance requirement in § 63.7710 that applies to you where initial compliance is not demonstrated using a performance test, you must demonstrate initial compliance no later than 30 calendar days after the compliance date that is specified for your iron and steel foundry in § 63.7683.

(c) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, you must demonstrate initial compliance with either the proposed emissions limit or the promulgated emissions limit no later than October 19, 2004 or no later than 180 calendar days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, and you chose to comply with the proposed emissions limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emissions limit by October 19, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

§ 63.7731 When must I conduct subsequent performance tests?

(a) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP, VOHAP, and TEA emissions limitations in § 63.7690 for your iron and steel foundry no less frequently than every 5 years and each time you elect to change an operating limit or to comply with a different alternative emissions limit, if applicable. The requirement to conduct performance tests every 5 years does not apply to an emissions source for which a continuous emissions monitoring system (CEMS) is used to demonstrate continuous compliance.

(b) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in § 63.7690(a)(7) for your iron and steel foundry no less frequently than once every 6 months.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, Feb. 7, 2008]

§ 63.7732 What test methods and other procedures must I use to demonstrate initial compliance with the emissions limitations?

(a) You must conduct each performance test that applies to your iron and steel foundry based on your selected compliance alternative, if applicable, according to the requirements in § 63.7(e)(1) and the conditions specified in paragraphs (b) through (i) of this section.

(b) To determine compliance with the applicable emissions limit for PM in § 63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (b)(1) through (6) of this section.

(1) Determine the concentration of PM according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5B, 5D, 5F, or 5I, as applicable, to determine the PM concentration. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch.

(2) Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater. For a cupola metal melting furnace at an existing iron and steel foundry that is subject to the PM emissions limit in § 63.7690(a)(ii), calculate the PM emissions rate in pounds of PM per ton (lb/ton) of metal charged using Equation 1 of this section:

$$EF_{PM} = C_{PM} \times \left(\frac{Q}{M_{charge}}\right) \times \left(\frac{t_{test}}{7,000}\right) \qquad (Eq.1)$$

Where:

EF_{PM} = Mass emissions rate of PM, pounds of PM per ton (lb/ton) of metal charged;

C_{PM} = Concentration of PM measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per minute (dscfm);

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and

7,000 = Unit conversion factor, grains per pound (gr/lb).

(c) To determine compliance with the applicable emissions limit for total metal HAP in § 63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (c)(1) through (6) of this section.

(1) Determine the concentration of total metal HAP according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (c)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 29 to determine the total metal HAP concentration.

(2) A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater during each performance test run and calculate the total metal HAP emissions rate (pounds of total metal HAP per ton (lb/ton) of metal charged) using Equation 2 of this section:

$$EF_{TMHAP} = C_{TMHAP} \times \left(\frac{Q}{M_{charge}}\right) \times \left(\frac{t_{test}}{7,000}\right) \qquad \text{(Eq. 2)}$$

Where:

EF_{TMHAP} = Emissions rate of total metal HAP, pounds of total metal HAP per ton (lb/ton) of metal charged;

C_{TMHAP} = Concentration of total metal HAP measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dscfm;

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and

7,000 = Unit conversion factor, gr/lb.

(d) To determine compliance with the opacity limit in § 63.7690(a)(7) for fugitive emissions from buildings or structures housing any iron and steel foundry emissions source at the iron and steel foundry, follow the procedures in paragraphs (d)(1) and (2) of this section.

(1) Using a certified observer, conduct each opacity test according to the requirements in EPA Method 9 (40 CFR part 60, appendix A) and § 63.6(h)(5). The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.

(2) During testing intervals when PM performance tests, if applicable, are being conducted, conduct the opacity test such the opacity observations are recorded during the PM performance tests.

(e) To determine compliance with the applicable VOHAP emissions limit in § 63.7690(a)(8) for a cupola metal melting furnace or in § 63.7690(a)(9) for a scrap preheater, follow the test methods and procedures in paragraphs (e)(1) through (4) of this section.

(1) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of total gaseous nonmethane organics (TGNMO) or Method 25A to determine the concentration of total organic compounds (TOC), using hexane as the calibration gas.

(2) Determine the average VOHAP, TGNMO, or TOC concentration using a minimum of three valid test runs. Each test run must include a minimum of 60 continuous operating minutes.

(3) For a cupola metal melting furnace, correct the measured concentration of VOHAP, TGNMO, or TOC for oxygen content in the gas stream using Equation 3 of this section:

$$C_{VOHAP,\ 10\%O_2} = C_{VOHAP} \left[\frac{10.9\%}{20.9\% - \%O_2} \right] \quad \text{(Eq. 3)}$$

Where:

C_{VOHAP} = Concentration of VOHAP in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the concentration of TGNMO or TOC in ppmv as hexane as measured by Method 25 or 25A in 40 CFR part 60, appendix A; and

$\%O_2$ = Oxygen concentration in gas stream, percent by volume (dry basis).

(4) For a cupola metal melting furnace, measure the combustion zone temperature of the combustion device with the CPMS required in § 63.7740(d) during each sampling run in 15-minute intervals. Determine and record the 15-minute average of the three runs.

(f) Follow the applicable procedures in paragraphs (f)(1) through (3) of this section to determine compliance with the VOHAP emissions limit in § 63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines.

(1) Follow these procedures to demonstrate compliance by direct measurement of total hydrocarbons (a surrogate for VOHAP) using a volatile organic compound (VOC) CEMS.

(i) Using the VOC CEMS required in § 63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) for 180 continuous operating minutes. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Reduce the monitoring data to hourly averages as specified in § 63.8(g)(2).

(iii) Compute and record the 3-hour average of the monitoring data.

(2) As an alternative to the procedures in paragraph (f)(1) of this section, you may demonstrate compliance with the VOHAP emissions limit in § 63.7690(a)(10) by establishing a site-specific TOC emissions limit that is correlated to the VOHAP emissions limit according to the procedures in paragraph (f)(2)(i) through (ix) of this section.

(i) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraph (f)(2)(ii) through (vi) of this section.

(ii) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(iii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iv) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(v) Method 4 to determine the moisture content of the stack gas.

(vi) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of TGNMO using hexane as the calibration gas.

(vii) Using the CEMS required in § 63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) during each of the Method 18 (or Method 25) sampling runs. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(viii) Calculate the average VOHAP (or TGNMO) concentration for the source test as the arithmetic average of the concentrations measured for the individual test runs, and determine the average concentration of total hydrocarbon (as hexane) as measured by the CEMS during all test runs.

(ix) Calculate the site-specific VOC emissions limit using Equation 4 of this section:

$$VOC_{limit} = 20 \times \frac{C_{VOHAP,avg}}{C_{CEM}} \qquad (Eq. 4)$$

Where:

$C_{VOHAP,avg}$ = Average concentration of VOHAP for the source test in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the average concentration of TGNMO for the source test in ppmv as hexane as measured by Method 25 in 40 CFR part 60, appendix A; and

C_{CEM} = Average concentration of total hydrocarbons in ppmv as hexane as measured using the CEMS during the source test.

(3) For two or more exhaust streams from one or more automated conveyor and pallet cooling lines or automated shakeout lines, compute the flow-weighted average concentration of VOHAP emissions for each combination of exhaust streams using Equation 5 of this section:

$$C_w = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i} \qquad (Eq. 5)$$

Where:

C_w = Flow-weighted concentration of VOHAP or VOC, ppmv (as hexane);

C_i = Concentration of VOHAP or VOC from exhaust stream “i”, ppmv (as hexane);

n = Number of exhaust streams sampled; and

Q_i = Volumetric flow rate of effluent gas from exhaust stream “i,”, dscfm.

(g) To determine compliance with the emissions limit or standard in § 63.7690(a)(11) for a TEA cold box mold or core making line, follow the test methods in 40 CFR part 60, appendix A, specified in paragraphs (g)(1) through (4) of this section.

(1) Determine the TEA concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (g)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. If you elect to meet the 99 percent reduction standard, sampling sites must be located both at the inlet to the control device and at the outlet of the control device prior to any releases to the atmosphere. If you elect to meet the concentration limit, the sampling site must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the TEA concentration. Alternatively, you may use NIOSH Method 2010 (incorporated by reference—see § 63.14) to determine the TEA concentration provided the performance requirements outlined in section 13.1 of EPA Method 18 are satisfied. The sampling option and time must be sufficiently long such that either the TEA concentration in the field sample is at least 5 times the limit of detection for the analytical method or the test results calculated using the laboratory's reported analytical detection limit for the specific field samples are less than $\frac{1}{5}$ of the applicable emissions limit. When using Method 18, the adsorbent tube approach, as described in section 8.2.4 of Method 18, may be required to achieve the necessary analytical detection limits. The sampling time must be at least 1 hour in all cases.

(2) If you use a wet acid scrubber, conduct the test as soon as practicable after adding fresh acid solution and the system has reached normal operating conditions.

(3) If you use a wet acid scrubber that is subject to the operating limit in § 63.7690(b)(5)(ii) for pH level, determine the pH of the scrubber blowdown using the procedures in paragraph (g)(3)(i) or (ii) of this section.

(i) Measure the pH of the scrubber blowdown with the CPMS required in § 63.7740(f)(2) during each TEA sampling run in intervals of no more than 15 minutes. Determine and record the 3-hour average; or

(ii) Measure and record the pH level using the probe and meter required in § 63.7740(f)(2) once each sampling run. Determine and record the average pH level for the three runs.

(4) If you are subject to the 99 percent reduction standard, calculate the mass emissions reduction using Equation 6 of this section:

$$\%\,\text{reduction} = \frac{E_i - E_o}{E_i} \times 100\% \qquad \text{(Eq. 6)}$$

Where:

E_i = Mass emissions rate of TEA at control device inlet, kilograms per hour (kg/hr); and

E_o = Mass emissions rate of TEA at control device outlet, kg/hr.

(h) To determine compliance with the PM or total metal HAP emissions limits in § 63.7690(a)(1) through (6) when one or more regulated emissions sources are combined with either another regulated emissions source subject to a different emissions limit or other non-regulated emissions sources, you may demonstrate compliance using one of the procedures in paragraphs (h)(1) through (3) of this section.

(1) Meet the most stringent applicable emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(2) Use the procedures in paragraphs (h)(2)(i) through (iii) of this section.

(i) Determine the volumetric flow rate of the individual regulated streams for which emissions limits apply.

(ii) Calculate the flow-weighted average emissions limit, considering only the regulated streams, using Equation 5 of this section, except C_w is the flow-weighted average emissions limit for PM or total metal HAP in the exhaust stream, gr/dscf; and C_i is the concentration of PM or total metal HAP in exhaust stream “i”, gr/dscf.

(iii) Meet the calculated flow-weighted average emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(3) Use the procedures in paragraphs (h)(3)(i) through (iii) of this section.

(i) Determine the PM or total metal HAP concentration of each of the regulated streams prior to the combination with other exhaust streams or control device.

(ii) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 6 of this section, except E_i is the mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr and E_o is the mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(iii) Meet the applicable emissions limit based on the calculated PM or total metal HAP concentration for the regulated emissions sources using Equation 7 of this section:

$$C_{released} = C_i \times \left(1 - \frac{\%\ reduction}{100}\right) \quad (Eq.\ 7)$$

Where:

$C_{released}$ = Calculated concentration of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, gr/dscf; and

C_i = Concentration of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, gr/dscf.

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

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, Feb. 7, 2008]

§ 63.7733 What procedures must I use to establish operating limits?

(a) For each capture system subject to operating limits in § 63.7690(b)(1)(ii), you must establish site-specific operating limits in your operation and maintenance plan according to the procedures in paragraphs (a)(1) through (3) of this section.

(1) Concurrent with applicable emissions and opacity tests, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements in § 63.7740(a).

(2) For any dampers that are manually set and remain at the same position at all times the capture system is operating, the damper position must be visually checked and recorded at the beginning and end of each run.

(3) Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.

(b) For each wet scrubber subject to the operating limits in § 63.7690(b)(2) for pressure drop and scrubber water flow rate, you must establish site-specific operating limits according to the procedures specified in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7740(c), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM test run.

(2) Compute and record the average pressure drop and average scrubber water flow rate for each valid sampling run in which the applicable emissions limit is met.

(c) For each combustion device applied to emissions from a scrap preheater or TEA cold box mold or core making line subject to the operating limit in § 63.7690(b)(4) for combustion zone temperature, you must establish a site-specific operating limit according to the procedures specified in paragraphs (c)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7740(e), measure and record the combustion zone temperature during each sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average combustion zone temperature for each valid sampling run in which the applicable emissions limit is met.

(d) For each acid wet scrubber subject to the operating limit in § 63.7690(b)(5), you must establish a site-specific operating limit for scrubbing liquid flow rate according to the procedures specified in paragraphs (d)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7740(f), measure and record the scrubbing liquid flow rate during each TEA sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average scrubbing liquid flow rate for each valid sampling run in which the applicable emissions limit is met.

(e) You may change the operating limits for a capture system, wet scrubber, acid wet scrubber, or combustion device if you meet the requirements in paragraphs (e)(1) through (3) of this section.

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

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in § 63.7690.

(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) through (d) of this section.

(f) You may use a previous performance test (conducted since December 22, 2002) to establish an operating limit provided the test meets the requirements of this subpart.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

§ 63.7734 How do I demonstrate initial compliance with the emissions limitations that apply to me?

(a) You have demonstrated initial compliance with the emissions limits in § 63.7690(a) by meeting the applicable conditions in paragraphs (a)(1) through (11) of this section. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.005 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.006 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0005 gr/dscf; or

(iii) The average PM mass emissions rate, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) The average total metal HAP mass emissions rate, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.001 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in § 63.7732(b), did not exceed 0.010 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in § 63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, the opacity of fugitive emissions from foundry operations discharged to the atmosphere, determined according to the performance test procedures in § 63.7732(d), did not exceed 20 percent (6-minute average), except for one 6-minute average per hour that did not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, the average VOHAP concentration, determined according to the performance test procedures in § 63.7732(e), did not exceed 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing iron and steel foundry that does not meet the work practice standards in § 63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not meet the work practice standard in § 63.7700(f), the average VOHAP concentration determined according to the performance test procedures in § 63.7732(e), did not exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new foundry,

(i) You have reduced the data from the CEMS to 3-hour averages according to the performance test procedures in § 63.7732(f)(1) or (2); and

(ii) The 3-hour flow-weighted average VOHAP concentration, measured according to the performance test procedures in § 63.7332(f)(1) or (2), did not exceed 20 ppmv.

(11) For each TEA cold box mold or core making line in a new or existing iron and steel foundry, the average TEA concentration, determined according to the performance test procedures in § 63.7732(g), did not exceed 1 ppmv or was reduced by 99 percent.

(b) You have demonstrated initial compliance with the operating limits in § 63.7690(b) if:

(1) For each capture system subject to the operating limit in § 63.7690(b)(1)(ii),

(i) You have established appropriate site-specific operating limits in your operation and maintenance plan according to the requirements in § 63.7710(b); and

(ii) You have a record of the operating parameter data measured during the performance test in accordance with § 63.7733(a); and

(2) For each wet scrubber subject to the operating limits in § 63.7690(b)(2) for pressure drop and scrubber water flow rate, you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with § 63.7733(b).

(3) For each combustion device subject to the operating limit in § 63.7690(b)(3) for combustion zone temperature, you have a record of the combustion zone temperature measured during the performance test in accordance with § 63.7732(e)(4).

(4) For each combustion device subject to the operating limit in § 63.7690(b)(4) for combustion zone temperature, you have established appropriate site-specific operating limits and have a record of the combustion zone temperature measured during the performance test in accordance with § 63.7733(c).

(5) For each acid wet scrubber subject to the operating limits in § 63.7690(b)(5) for scrubbing liquid flow rate and scrubber blowdown pH,

(i) You have established appropriate site-specific operating limits for the scrubbing liquid flow rate and have a record of the scrubbing liquid flow rate measured during the performance test in accordance with § 63.7733(d); and

(ii) You have a record of the pH of the scrubbing liquid blowdown measured during the performance test in accordance with § 63.7732(g)(3).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

§ 63.7735 How do I demonstrate initial compliance with the work practice standards that apply to me?

(a) For each iron and steel foundry subject to the certification requirement in § 63.7700(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that: “At all times, your foundry will purchase and use only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids.”

(b) For each iron and steel foundry subject to the requirements in § 63.7700(c) for a scrap inspection and selection plan, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted a written plan to the Administrator for approval according to the requirements in § 63.7700(c); and

(2) You will operate at all times according to the plan requirements.

(c) For each furan warm box mold or core making line in a new or existing foundry subject to the work practice standard in § 63.7700(d), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You will meet the no methanol requirement for the catalyst portion of each binder chemical formulation; and

(2) You have records documenting your certification of compliance, such as a material safety data sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet, onsite and available for inspection.

(d) For each scrap preheater at an existing iron and steel foundry subject to the work practice standard in § 63.7700(e)(1) or (2), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have installed a gas-fired preheater where the flame directly contacts the scrap charged, you will operate and maintain each gas-fired scrap preheater such that the flame directly contacts the scrap charged, and you have records documenting your certification of compliance that are onsite and available for inspection; or

(2) You will charge only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

(e) For each scrap preheater at a new iron and steel foundry subject to the work practice standard in § 63.7700(f), you have demonstrated initial compliance if you have certified in your notification of compliance status that you will charge only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005]

§ 63.7736 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system subject to an operating limit in § 63.7690(b), you have demonstrated initial compliance if you have met the conditions in paragraphs (a)(1) and (2) of this section.

(1) You have certified in your notification of compliance status that:

(i) You have submitted the capture system operation and maintenance plan to the Administrator for approval according to the requirements of § 63.7710(b); and

(ii) You will inspect, operate, and maintain each capture system according to the procedures in the plan.

(2) You have certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan.

(b) For each control device subject to an operating limit in § 63.7690(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the control device operation and maintenance plan to the Administrator for approval according to the requirements of § 63.7710(b); and

(2) You will inspect, operate, and maintain each control device according to the procedures in the plan.

(c) For each bag leak detection system, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the bag leak detection system monitoring information to the Administrator within the written O&M plan for approval according to the requirements of § 63.7710(b);

(2) You will inspect, operate, and maintain each bag leak detection system according to the procedures in the plan; and

(3) You will follow the corrective action procedures for bag leak detection system alarms according to the requirements in the plan.

(d) For each pouring area and pouring station in a new or existing foundry, you have demonstrated initial compliance if you have certified in your notification of compliance status report that:

(1) You have submitted the mold vent ignition plan to the Administrator for approval according to the requirements in § 63.7710(b); and

(2) You will follow the procedures for igniting mold vent gases according to the requirements in the plan.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

Continuous Compliance Requirements

§ 63.7740 What are my monitoring requirements?

(a) For each capture system subject to an operating limit in § 63.7690(b)(1), you must install, operate, and maintain a CPMS according to the requirements in § 63.7741(a) and the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you use a flow measurement device to monitor the operating limit parameter, you must at all times monitor the hourly average rate (*e.g.,* the hourly average actual volumetric flow rate through each separately ducted hood or the average hourly total volumetric flow rate at the inlet to the control device).

(2) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must at all times monitor the relative change in PM loadings using a bag leak detection system according to the requirements in § 63.7741(b).

(c) For each baghouse, regardless of type, that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must conduct inspections at their specified frequencies according to the requirements specified in paragraphs (c)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulse-jet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspections or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or lying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(d) For each wet scrubber subject to the operating limits in § 63.7690(b)(2), you must at all times monitor the 3-hour average pressure drop and scrubber water flow rate using CPMS according to the requirements in § 63.7741(c).

(e) For each combustion device subject to the operating limit in § 63.7690(b)(3), you must at all times monitor the 15-minute average combustion zone temperature using a CPMS according to the requirements of § 63.7741(d).

(f) For each combustion device subject to the operating limit in § 63.7690(b)(4), you must at all times monitor the 3-hour average combustion zone temperature using CPMS according to the requirements in § 63.7741(d).

(g) For each wet acid scrubber subject to the operating limits in § 63.7690(b)(5),

(1) You must at all times monitor the 3-hour average scrubbing liquid flow rate using CPMS according to the requirements of § 63.7741(e)(1); and

(2) You must at all times monitor the 3-hour average pH of the scrubber blowdown using CPMS according to the requirements in § 63.7741(e)(2) or measure and record the pH of the scrubber blowdown once per production cycle using a pH probe and meter according to the requirements in § 63.7741(e)(3).

(h) For one or more automated conveyor and pallet cooling lines and automated shakeout lines at a new iron and steel foundry subject to the VOHAP emissions limit in § 63.7690(a)(10), you must at all times monitor the 3-hour average VOHAP concentration using a CEMS according to the requirements of § 63.7741(g).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

§ 63.7741 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each capture system subject to an operating limit in § 63.7690(b)(1), you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a)(1) through (3) of this section.

(1) If you use a flow measurement device to monitor an operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(1)(i) through (iv) of this section.

(i) Locate the flow sensor and other necessary equipment such as straightening vanes in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) If you use a pressure measurement device to monitor the operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(2)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close as possible to a position that provides a representative measurement of the pressure and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a “non-clogging” pressure tap is used, check for pluggage monthly.

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) Record the results of each inspection, calibration, and validation check.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (b)(1) through (7) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

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

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

(4) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).

(5) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time without approval from the Administrator. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the operation and maintenance plan required by § 63.7710(b).

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

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

(c) For each wet scrubber subject to the operating limits in § 63.7690(b)(2), you must install and maintain CPMS to measure and record the pressure drop and scrubber water flow rate according to the requirements in paragraphs (c)(1) and (2) of this section.

(1) For each CPMS for pressure drop you must:

(i) Locate the pressure sensor in or as close as possible to a position that provides a representative measurement of the pressure drop and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a “non-clogging” pressure tap is used, check for pluggage monthly.

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) For each CPMS for scrubber liquid flow rate, you must:

(i) Locate the flow sensor and other necessary equipment in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually according to the manufacturer's instructions.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(d) For each combustion device subject to the operating limit in § 63.7690(b)(3) or (4), you must install and maintain a CPMS to measure and record the combustion zone temperature according to the requirements in paragraphs (d)(1) through (8) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) For a noncryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 0.75 percent of the temperature value, whichever is larger.

(3) For a cryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 2 percent of the temperature value, whichever is larger.

(4) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(5) If you use a chart recorder, it must have a sensitivity in the minor division of at least 20 °F.

(6) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check, in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 16.7 °C of the process temperature sensor's reading.

(7) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range, or install a new temperature sensor.

(8) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(e) For each wet acid scrubber subject to the operating limits in § 63.7690(b)(5), you must:

(1) Install and maintain CPMS to measure and record the scrubbing liquid flow rate according to the requirements in paragraph (c)(2) of this section; and

(2) Install and maintain CPMS to measure and record the pH of the scrubber blowdown according to the requirements in paragraph (e)(2)(i) through (iv) of this section.

(i) Locate the pH sensor in a position that provides a representative measurement of the pH and that minimizes or eliminates internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.1 pH or a transducer with a minimum measurement sensitivity of 5 percent of the pH range.

(iii) Check gauge calibration quarterly and transducer calibration monthly using a manual pH gauge.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) As an alternative to the CPMS required in paragraph (e)(2) of this section, you may use a pH probe to extract a sample for analysis by a pH meter that meets the requirements in paragraphs (e)(3)(i) through (iii) of this section.

(i) The pH meter must have a range of at least 1 to 5 or more;

(ii) The pH meter must have an accuracy of ±0.1; and

(iii) The pH meter must have a resolution of at least 0.1 pH.

(f) You must operate each CPMS used to meet the requirements of this subpart according to the requirements specified in paragraphs (f)(1) through (3) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of three of the required four data points to constitute a valid hour of data.

(2) Each CPMS must have valid hourly data for 100 percent of every averaging period.

(3) Each CPMS must determine and record the hourly average of all recorded readings and the 3-hour average of all recorded readings.

(g) For each automated conveyor and pallet cooling line and automated shakeout line at a new iron and steel foundry subject to the VOHAP emissions limit in § 63.7690(a)(10), you must install, operate, and maintain a CEMS to measure and record the concentration of VOHAP emissions according to the requirements in paragraphs (g)(1) through (3) of this section.

(1) You must install, operate, and maintain each CEMS according to Performance Specification 8 in 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each CEMS according to the requirements of § 63.8 and Performance Specification 8 in 40 CFR part 60, appendix B.

(3) You must operate each CEMS according to the requirements specified in paragraph (g)(3)(i) through (iv) of this section.

(i) 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.

(ii) You must reduce CEMS data as specified in § 63.8(g)(2).

(iii) Each CEMS must determine and record the 3-hour average emissions using all the hourly averages collected for periods during which the CEMS is not out-of-control.

(iv) Record the results of each inspection, calibration, and validation check.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

§ 63.7742 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) any time a source of emissions is operating.

(b) 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 emissions or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

§ 63.7743 How do I demonstrate continuous compliance with the emissions limitations that apply to me?

(a) You must demonstrate continuous compliance by meeting the applicable conditions in paragraphs (a)(1) through (12) of this section. When alternative emissions limitations are provided for a given emissions source, you must comply with the alternative emissions limitation most recently selected as your compliance alternative.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.005 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.006 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0005 gr/dscf; or

(iii) Maintaining the average PM mass emissions rate at or below 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) Maintaining the average total metal HAP mass emissions rate at or below 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at new iron and steel foundry, (i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.001 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.010 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, maintaining the opacity of any fugitive emissions from foundry operations discharged to the atmosphere at or below 20 percent opacity (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing new iron and steel foundry that does not comply with the work practice standard in § 63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not comply with the work practice standard in § 63.7700(f), maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines or automated shakeout lines that use a sand mold system at a new iron and steel foundry,

(i) Maintaining the 3-hour flow-weighted average VOHAP concentration in the exhaust stream at or below 20 ppmv;

(ii) Inspecting and maintaining each CEMS according to the requirements of § 63.7741(g) and recording all information needed to document conformance with these requirements; and

(iii) Collecting and reducing monitoring data for according to the requirements of § 63.7741(g) and recording all information needed to document conformance with these requirements.

(11) For each TEA cold box mold or core making line at a new or existing iron and steel foundry, maintaining a 99 percent reduction in the VOHAP concentration in the exhaust stream or maintaining the average VOHAP concentration in the exhaust stream at or below 1 ppmv.

(12) Conducting subsequent performance tests at least every 5 years for each emissions source subject to an emissions limit for PM, total metal HAP, VOHAP, or TEA in § 63.7690(a) and subsequent performance tests at least every 6 months for each building or structure subject to the opacity limit in § 63.7690(a)(7).

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in § 63.7690(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(1) Operating the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitoring the capture system according to the requirements in § 63.7740(a) and collecting, reducing, and recording the monitoring data for each of the operating limit parameters according to the applicable requirements in this subpart.

(c) For each baghouse,

(1) Inspecting and maintaining each baghouse according to the requirements of § 63.7740(c)(1) through (8) and recording all information needed to document conformance with these requirements; and

(2) If the baghouse is equipped with a bag leak detection system, maintaining records of the times the bag leak detection system sounded, 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) For each wet scrubber that is subject to the operating limits in § 63.7690(b)(2), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average pressure drop and 3-hour average scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(c) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements.

(e) For each combustion device that is subject to the operating limit in § 63.7690(b)(3), you must demonstrate continuous compliance by:

(1) Maintaining the 15-minute average combustion zone temperature at a level no lower than 1,300 °F;

(2) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements.

(f) For each combustion device that is subject to the operating limit in § 63.7690(b)(4), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average combustion zone temperature at a level no lower that established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements.

(g) For each acid wet scrubber subject to the operating limits in § 63.7690(b)(5), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average scrubbing liquid flow rate at a level no lower than the level established during the initial or subsequent performance test;

(2) Maintaining the 3-hour average pH of the scrubber blowdown at a level no higher than 4.5 (if measured by a CPMS) or maintaining the pH level of the scrubber blowdown during each production shift no higher than 4.5;

(3) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(e) and recording all information needed to document conformance with these requirements; and

(4) Collecting and reducing monitoring data for scrubbing liquid flow rate and scrubber blowdown pH according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements. If the pH level of the scrubber blowdown is measured by a probe and meter, you must demonstrate continuous compliance by maintaining records that document the date, time, and results of each sample taken for each production shift.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

§ 63.7744 How do I demonstrate continuous compliance with the work practice standards that apply to me?

(a) You must maintain records that document continuous compliance with the certification requirements in § 63.7700(b) or with the procedures in your scrap selection and inspection plan required in § 63.7700(c). Your records documenting compliance with the scrap selection and inspection plan must include a copy (kept onsite) of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.

(b) You must keep records of the chemical composition of all catalyst binder formulations applied in each furan warm box mold or core making line at a new or existing iron and steel foundry to demonstrate continuous compliance with the requirements in § 63.7700(d).

(c) For a scrap preheater at an existing iron and steel foundry, you must operate and maintain each gas-fired preheater such that the flame directly contacts the scrap charged to demonstrate continuous compliance with the requirement § 63.7700(e)(1). If you choose to meet the work practice standard in § 63.7700(e)(2), you must keep records to document that the scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b).

(d) For a scrap preheater at a new iron and steel foundry, you must keep records to document that each scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b) to demonstrate continuous compliance with the requirement in § 63.7700(f).

§ 63.7745 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system and control device for an emissions source subject to an emissions limit in § 63.7690(a), you must demonstrate continuous compliance with the operation and maintenance requirements of § 63.7710 by:

(1) Making monthly inspections of capture systems and initiating corrective action according to § 63.7710(b)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance for each control device according to the preventive maintenance plan required by § 63.7710(b)(3) and recording all information needed to document conformance with these requirements;

(3) Operating and maintaining each bag leak detection system according to the site-specific monitoring plan required by § 63.7710(b)(4) and recording all information needed to demonstrate conformance with these requirements;

(4) Initiating and completing corrective action for a bag leak detection system alarm according to the corrective action plan required by § 63.7710(b)(5) and recording all information needed to document conformance with these requirements; and

(5) Igniting gases from mold vents according to the procedures in the plan required by § 63.7710(b)(6). (Any instance where you fail to follow the procedures is a deviation that must be included in your semiannual compliance report.)

(b) You must maintain a current copy of the operation and maintenance plans required by § 63.7710(b) onsite and available for inspection upon request. You must keep the plans for the life of the iron and steel foundry or until the iron and steel foundry is no longer subject to the requirements of this subpart.

§ 63.7746 What other requirements must I meet to demonstrate continuous compliance?

(a) *Deviations.* You must report each instance in which you did not meet each emissions limitation in § 63.7690 (including each operating limit) that applies to you. This requirement includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet each work practice standard in § 63.7700 and each operation and maintenance requirement of § 63.7710 that applies to you. These instances are deviations from the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements of § 63.7751.

(b) *Startups, shutdowns, and malfunctions.* (1) Consistent with the requirements of §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations according to the provisions in § 63.6(e).

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

§ 63.7747 How do I apply for alternative monitoring requirements for a continuous emissions monitoring system?

(a) You may request an alternative monitoring method to demonstrate compliance with the VOHAP emissions limits in § 63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines at a new iron and steel foundry according to the procedures in this section.

(b) You can request approval to use an alternative monitoring method in the notification of construction or reconstruction for new sources, or at any time.

(c) You must submit a monitoring plan that includes a description of the control technique or pollution prevention technique, a description of the continuous monitoring system or method including appropriate operating parameters that will be monitored, test results demonstrating compliance with the emissions limit, operating limit(s) (if applicable) determined according to the test results, and the frequency of measuring and recording to establish continuous compliance. If applicable, you must also include operation and maintenance requirements for the monitors.

(d) The monitoring plan is subject to approval by the Administrator. Use of the alternative monitoring method must not begin until approval is granted by the Administrator.

Notifications, Reports, and Records

§ 63.7750 What notifications must I submit and when?

(a) You must submit all of the notifications required by §§ 63.6(h)(4) and (5), 63.7(b) and (c); 63.8(e); 63.8(f)(4) and (6); 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in § 63.9(b)(2), if you start up your iron and steel foundry before April 22, 2004, you must submit your initial notification no later than August 20, 2004.

(c) If you start up your new iron and steel foundry on or after April 22, 2004, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required by § 63.7(b)(1).

(e) If you are required to conduct a performance test or other initial compliance demonstration, you must submit a notification of compliance status according to the requirements of § 63.9(h)(2)(ii). For opacity performance tests, the notification of compliance status may be submitted with the semiannual compliance report in § 63.7751(a) and (b) or the semiannual part 70 monitoring report in § 63.7551(d).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to the requirement specified in § 63.10(d)(2).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

§ 63.7751 What reports must I submit and when?

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements specified in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your iron and steel foundry by § 63.7683 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your iron and steel foundry.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) 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) Each subsequent 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.

(5) For each iron and steel foundry that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 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 the dates specified in paragraphs (a)(1) through (4) of this section.

(b) Compliance report contents. Each compliance report must include the information specified in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

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

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

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took action consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from any emissions limitations (including operating limit), work practice standards, or operation and maintenance requirements, a statement that there were no deviations from the emissions limitations, work practice standards, or operation and maintenance requirements during the reporting period.

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

(7) For each deviation from an emissions limitation (including an operating limit) that occurs at an iron and steel foundry for which you are not using a continuous monitoring system (including a CPMS or CEMS) to comply with an emissions limitation or work practice standard required in this subpart, the compliance report must contain the information specified in paragraphs (b)(1) through (4) and (b)(7)(i) and (ii) of this section. This requirement includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each emissions source during the reporting period.

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

(8) For each deviation from an emissions limitation (including an operating limit) or work practice standard occurring at an iron and steel foundry where you are using a continuous monitoring system (including a CPMS or CEMS) to comply with the emissions limitation or work practice standard in this subpart, you must include the information specified in paragraphs (b)(1) through (4) and (b)(8)(i) through (xi) of this section. This requirement includes periods of startup, shutdown, and malfunction.

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

(ii) The date and time that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

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

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

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

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

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan and the source exceeds any applicable emissions limitation in § 63.7690, you must submit an immediate startup, shutdown, and malfunction report according to the requirements of § 63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an iron and steel foundry pursuant to 40 CFR part 70 or 40 CFR part 71, you 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 you submit a compliance report for an iron and steel foundry 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 the required information concerning deviations from any emissions limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an iron and steel foundry to your permitting authority.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

§ 63.7752 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (4) 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 requirements of § 63.10(b)(2)(xiv).

(2) The records specified in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

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

(4) Records of the annual quantity of each chemical binder or coating material used to coat or make molds and cores, the Material Data Safety Sheet or other documentation that provides the chemical composition of each component, and the annual quantity of HAP used in these chemical binder or coating materials at the foundry as calculated from the recorded quantities and chemical compositions (from Material Data Safety Sheets or other documentation).

(b) You must keep the following records for each CEMS.

(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) Request for alternatives to relative accuracy tests for CEMS as required in § 63.8(f)(6)(i).

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

(c) You must keep the records required by §§ 63.7743, 63.7744, and 63.7745 to show continuous compliance with each emissions limitation, work practice standard, and operation and maintenance requirement that applies to you.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

§ 63.7753 In what form and for how long must I keep my records?

(a) You must keep your records in a form suitable and readily available for expeditious review, according to the requirements of § 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 onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to the requirements in § 63.10(b)(1). You can keep the records for the previous 3 years offsite.

Other Requirements and Information

§ 63.7760 What parts of the General Provisions apply to me?

Table 1 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7761 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (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, in addition to 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 if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to non-opacity emissions limitations in § 63.7690 and work practice standards in § 63.7700 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.

Definitions

§ 63.7765 What definitions apply to this subpart?

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

Automated conveyor and pallet cooling line means any dedicated conveyor line or area used for cooling molds received from pouring stations.

Automated shakeout line means any mechanical process unit designed for and dedicated to separating a casting from a mold. These mechanical processes include, but are not limited to, shaker decks, rotary separators, and high-frequency vibration units. Automated shakeout lines do not include manual processes for separating a casting from a mold, such as personnel using a hammer, chisel, pick ax, sledge hammer, or jackhammer.

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

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

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

Cold box mold or core making line means a mold or core making line in which the formed aggregate is hardened by catalysis with a gas.

Combustion device means an afterburner, thermal incinerator, or scrap preheater.

Conveyance means the system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. A conveyance may, but does not necessarily include, control equipment designed to reduce emissions of the pollutants. Emissions that are released through windows, vents, or other general building ventilation or exhaust systems are not considered to be discharged through a conveyance.

Cooling means the process of molten metal solidification within the mold and subsequent temperature reduction prior to shakeout.

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

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

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

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

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

A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

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

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

Emissions limitation means any emissions limit or operating limit.

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

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

Fresh acid solution means a sulfuric acid solution used for the control of triethylamine emissions that has a pH of 2.0 or less.

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a *conveyance* as defined in this subpart.

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

Hazardous air pollutant means any substance on the list originally established in 112(b)(1) of the CAA and subsequently amended as published in the *Code of Federal Regulations.*

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

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

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

Mold vent means an intentional opening in a mold through which gases containing pyrolysis products of organic mold and core constituents produced by contact with or proximity to molten metal normally escape the mold during and after metal pouring.

Off blast means those periods of cupola operation when the cupola is not actively being used to produce molten metal. Off blast conditions include cupola startup when air is introduced to the cupola to preheat the sand bed and other cupola startup procedures as defined in the startup, shutdown, and malfunction plan. Off blast conditions also include idling conditions when the blast air is turned off or down to the point that the cupola does not produce additional molten metal.

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

Pouring area means an area, generally associated with floor and pit molding operations, in which molten metal is brought to each individual mold. Pouring areas include all pouring operations that do not meet the definition of a pouring station.

Pouring station means the fixed location to which molds are brought in a continuous or semicontinuous manner to receive molten metal, after which the molds are moved to a cooling area.

Responsible official means responsible official as defined in § 63.2.

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

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

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

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7222, Feb. 7, 2008]

Table 1 to Subpart EEEEE of Part 63—Applicability of General Provisions to Subpart EEEEE

[As stated in § 63.7760, you must meet each requirement in the following table that applies to you.]

Citation	Subject	Applies to Subpart EEEEE?	Explanation
63.1	Applicability	Yes	
63.2	Definitions	Yes	
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities	Yes	
63.5	Construction/reconstruction	Yes	
63.6(a)-(g)	Compliance with standards and maintenance requirements	Yes	
63.6(h)	Opacity and visible emissions standards	Yes	
63.6(i)-(j)	Compliance extension and Presidential compliance exemption	Yes	
63.7(a)(1)-(a)(2)	Applicability and performance test dates	No	Subpart EEEEE specifies applicability and performance test dates.
63.7(a)(3), (b)-(h)	Performance testing requirements	Yes	
63.8(a)(1)-(a)(3), (b), (c)(1)-(c)(3), (c)(6)-(c)(8), (d), (e), (f)(1)-(f)(6), (g)(1)-(g)(4)	Monitoring requirements	Yes	Subpart EEEEE specifies requirements for alternative monitoring systems.
63.8(a)(4)	Additional monitoring requirements for control devices in § 63.11	No	Subpart EEEEE does not require flares.
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No	Subpart EEEEE specifies requirements for operation of CMS and CEMS.
63.8(c)(5)	Continuous opacity monitoring system (COMS) Minimum Procedures	No	Subpart EEEEE does not require COMS.
63.8(g)(5)	Data reduction	No	Subpart EEEEE specifies data reduction requirements.

Citation	Subject	Applies to Subpart EEEEE?	Explanation
63.9	Notification requirements	Yes	Except: for opacity performance tests, Subpart EEEEE allows the notification of compliance status to be submitted with the semiannual compliance report or the semiannual part 70 monitoring report.
63.10(a)-(b), (c)(1)-(6), (c)(9)-(15), (d)(1)-(2), (e)(1)-(2), (f)	Recordkeeping and reporting requirements	Yes	Additional records for CMS in § 63.10(c)(1)-(6), (9)-(15) apply only to CEMS.
63.10(c)(7)-(8)	Records of excess emissions and parameter monitoring exceedances for CMS	No	Subpart EEEEE specifies records requirements.
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes	
63.10(e)(3)	Excess emissions reports	No	Subpart EEEEE specifies reporting requirements.
63.10(e)(4)	Reporting COMS data	No	Subpart EEEEE data does not require COMS.
63.11	Control device requirements	No	Subpart EEEEE does not require flares.
63.12	State authority and delegations	Yes	
63.13-63.15	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality	Yes	

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7223, Feb. 7, 2008]

Attachment B

Part 70 Operating Permit No: T139-34150-00011

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of § 60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 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 applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for

engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§ 60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§ 60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in § 60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in § 60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in § 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in § 60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§ 60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under § 60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§ 60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in § 60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in § 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in § 60.4201(a) through (c) and § 60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in § 60.4201(d) and (e) and § 60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any

such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in § 60.4202 but does not meet all the emission standards for non-emergency engines in § 60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§ 60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§ 60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in § 60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in § 60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(b) or § 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in § 60.4205(c), you must comply by purchasing an engine certified to the emission standards in § 60.4204(b), or § 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in § 60.4204(c) or § 60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in § 60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

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

(iii) 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;

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

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

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in § 60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(e) or § 60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in § 60.4204(e) or § 60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in § 60.4212 or § 60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. 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 ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in § 60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in § 60.4204(a), § 60.4205(a), or § 60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in § 60.4204(a), § 60.4205(a), or § 60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in § 60.4204(a), § 60.4205(a), or § 60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in § 60.4204(a), § 60.4205(a), or § 60.4205(c) may follow the testing procedures specified in § 60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in § 60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in § 60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

Ci = concentration of NOX or PM at the control device inlet,

Co = concentration of NOX or PM at the control device outlet, and

R = percent reduction of NOX or PM emissions.

(2) You must normalize the NOX or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\ O_2} \qquad \text{(Eq. 3)}$$

Where:

Cadj = Calculated NOX or PM concentration adjusted to 15 percent O2 .

Cd = Measured concentration of NOX or PM, uncorrected.

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

%O2 = Measured O2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O2 and CO2 concentration is measured in lieu of O2 concentration measurement, a CO2 correction factor is needed. Calculate the CO2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

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

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

Fo = Fuel factor based on the ratio of O2 volume to the ultimate CO2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O2 , percent/100.

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

Fc = 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 O2 , as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

XCO2 = CO2 correction factor, percent.

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

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

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

Cadj = Calculated NOX or PM concentration adjusted to 15 percent O2 .

Cd = Measured concentration of NOX or PM, uncorrected.

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

(e) To determine compliance with the NOX mass per unit output emission limitation, convert the concentration of NOX in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

Cd = Measured NOX concentration in ppm.

1.912x10−3 = Conversion constant for ppm NOX to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 8)}$$

Where:

ER = Emission rate in grams per KW-hour.

Cadj = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in § 60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in § 60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in § 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in § 60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 60.4.

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§ 60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in § 60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) 45 · n−0.2 g/KW-hr (34 · n−0.2 g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) 44 · n−0.23 g/KW-hr (33 · n−0.23 g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§ 60.4201(f) and 60.4202(g) of this subpart.

(c) Manufacturers, owners and operators of stationary CI ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in § 60.4202 and § 60.4205, and not those for non-emergency engines in § 60.4201 and § 60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in § 60.4201 and § 60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of § 60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of § 60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and § 60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011]

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in § 60.4204 or § 60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

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

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

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 number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in § 60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in § 60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE 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 ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 60.4211(f)(2)(ii) or (iii) and § 60.4211(f)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas 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 internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§ 60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in § 60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X+ NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in § 60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to § 60.4202(d)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1]Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§ 60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ [1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ [1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+ [2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ [3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ [3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1] For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2] For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3] In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in § 60.4210(f) and the recordkeeping requirements in § 60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in § 60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed [1]	Torque (percent) [2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1] Engine speed: ±2 percent of point.

[2] Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

[As stated in § 60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO_X emissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(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;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_X concentration.
		iv. Measure NO_X at the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17)	(d) NO_X 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.

For each	Complying with the requirement to	You must	Using	According to the following requirements
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(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 internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see § 60.17)	(d) NO_X 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.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(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;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM 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.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM 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.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in § 60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§ 60.1	General applicability of the General Provisions	Yes	
§ 60.2	Definitions	Yes	Additional terms defined in § 60.4219.
§ 60.3	Units and abbreviations	Yes	
§ 60.4	Address	Yes	
§ 60.5	Determination of construction or modification	Yes	
§ 60.6	Review of plans	Yes	
§ 60.7	Notification and Recordkeeping	Yes	Except that § 60.7 only applies as specified in § 60.4214(a).
§ 60.8	Performance tests	Yes	Except that § 60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§ 60.9	Availability of information	Yes	
§ 60.10	State Authority	Yes	
§ 60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§ 60.12	Circumvention	Yes	
§ 60.13	Monitoring requirements	Yes	Except that § 60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§ 60.14	Modification	Yes	
§ 60.15	Reconstruction	Yes	
§ 60.16	Priority list	Yes	

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§ 60.17	Incorporations by reference	Yes	
§ 60.18	General control device requirements	No	
§ 60.19	General notification and reporting requirements	Yes	

Attachment C

Part 70 Operating Permit No: T139-34150-00011

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in § 63.6675, which includes operating according to the provisions specified in § 63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§ 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 that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(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 that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(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;

(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; 78 FR 6700, Jan. 30, 2013]

§ 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, operating limitations and other requirements 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, operating limitations, and other requirements 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, operating limitations, and other requirements 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; 78 FR 6701, Jan. 30, 2013]

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 and other requirements 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 and other requirements 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.

[78 FR 6701, Jan. 30, 2013]

§ 63.6603 What emission limitations, operating limitations, and other requirements 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 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in § 63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in § 63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in § 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in § 63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in § 63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

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

(a) 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.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2), or are on offshore vessels that meet § 63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

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, operating limitations, and other requirements 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, as amended at 78 FR 6702, Jan. 30, 2013]

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. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(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, unless otherwise specified in this subpart.

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

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

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

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

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, 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 (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 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:

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

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 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, dsm^3 /J (dscf/10^6 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq. 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 —15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 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.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§ 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 O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(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 CO_2 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 (6) 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)(ii) 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 stationary RICE located at an area 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.

(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 (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 that meet either § 63.6603(b)(1) or § 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet § 63.6603(c) do not have to meet the requirements of this paragraph (g).

(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 business 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 business 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 business 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 business 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; 78 FR 6703, Jan. 30, 2013]

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

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement 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.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

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, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements 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) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(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) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. 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 calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, 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.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[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; 78 FR 6704, Jan. 30, 2013]

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).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in § 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in § 63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§ 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.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in § 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in § 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§ 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) through (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 engine is used for the purposes specified in § 63.6640(f)(2)(ii) or (iii) or § 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(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; 78 FR 6706, Jan. 30, 2013]

§ 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:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

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.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see § 63.14).

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 CO_2 .

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 reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. 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.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. 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.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 63.6640(f)(2)(ii) or (iii) and § 63.6640(f)(4)(i) or (ii).

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 CO_2 .

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 CO_2, 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 $C_3 H_8$.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

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 PPPPP 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; 78 FR 6706, Jan. 30, 2013]

Table 1 a to 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	

[1]Sources 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 1 b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major 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:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions 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 existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions 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;	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.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions 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	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions 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.	

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

[78 FR 6706, Jan. 30, 2013]

Table 2 a to 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	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
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	

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

[75 FR 9680, Mar. 3, 2010]

Table 2 b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI 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 CI Stationary RICE >500 HP

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 CI 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; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde 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. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce 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 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]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

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

[78 FR 6707, Jan. 30, 2013]

Table 2 c to 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, and replace as necessary; 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, and replace as necessary; 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.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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, and replace as necessary; 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, and replace as necessary;	
	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, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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 stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1] If 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.

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

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

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2 d to 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] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	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.
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 replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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 replace as necessary; 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 replace as necessary; 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 replace as necessary; 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 remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. 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 replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	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 replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

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

[2] If 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.

[78 FR 6709, Jan. 30, 2013]

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 >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 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 >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

[1] After 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.

[78 FR 6711, Jan. 30, 2013]

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) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a c]	(a) 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) ASTM D6522-00 (Reapproved 2005) [a b c] or Method 10 of 40 CFR part 60, appendix A	(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 D6522-00 (Reapproved 2005).[a]	(a) measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC 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]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, 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,[a] 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. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC 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.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		ii. Determine the O_2concentration 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 (Reapproved 2005).[a]	(a) measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde or CO 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]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO 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,[a]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] [c]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.[a]	(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 or longer runs.

[a] Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

[c] ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

[78 FR 6711, Jan. 30, 2013]

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

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, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	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, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	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, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	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, and 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 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.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 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.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 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
		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.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and 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, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; 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.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	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 or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		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. 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 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. 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.
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 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. 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.
11. 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 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.
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. 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.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

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 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 not 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 approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the 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, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	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.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		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.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	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
		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 ≥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, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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≤HP≤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≤HP≤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, 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 stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, 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, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or 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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	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
		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.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	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
		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.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	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.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent $O_{2,}$or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

[a] After 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.

[78 FR 6715, Jan. 30, 2013]

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≤HP≤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; 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≤HP≤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	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.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
		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	i. Semiannually according to the requirements in § 63.6650(b).
		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).
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 of the gross heat input on an annual basis; and	i. Annually, according to the requirements in § 63.6650.
		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.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5).
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in § 63.6640(f)(4)(ii)	Report	a. The information in § 63.6650(h)(1)	i. annually according to the requirements in § 63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 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	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
		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	Except that the most recent 2 years of data do not have to be retained on site.
§ 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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 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.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2 , or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2 ; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2 . When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ± 10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ± 3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ± 3 percent of the up-scale gas value or ± 1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ± 0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ± 5 percent or ± 1 ppm for CO or ± 0.5 percent O_2 , whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ± 2 percent or ± 1 ppm for CO or ± 0.5 percent O_2 , whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ± 2 percent, or ± 1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ± 2 percent *or ± 1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed*).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ± 5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average "measurement data phase" CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The

absolute value of the difference between the maximum and minimum average values recorded must not vary more than ± 3 percent or ± 1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) “ICAC Test Protocol for Periodic Monitoring”, EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____											
Run Type:	(_)			(_)			(_)			(_)	
(X)	Pre-Sample Calibration			Stack Gas Sample			Post-Sample Cal. Check			Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
″											
″											
″											
″											
Measurement Data Phase											
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Mean											
Refresh Phase											
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[78 FR 6721, Jan. 30, 2013]

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**INTAT Precision, Inc.**
Source Location:	**2148 State Rd. 3 North, Rushville, Indiana 46173**
County:	**Rush**
SIC Code:	**3321 (Gray and Ductile Iron Foundries)**
Permit Renewal No.:	**T139-34150-00011**
Permit Reviewer:	**Ryan Graunke**

On August 11, 2014, the Office of Air Quality (OAQ) had a notice published in the Rushville Republican, Rushville, Indiana, stating that INTAT Precision, Inc. had applied for a Part 70 Operating Permit Renewal to renew its operating permit. The notice also stated that the OAQ proposed to issue a Part 70 Operating Permit Renewal 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 8, 2014, Erin Surinak with Environmental Resource Management submitted comments to IDEM, OAQ on the draft Part 70 Operating Permit Renewal.

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:

Regarding the emission statement requirement found in Condition C.15, we understand that IDEM wishes to include the 2005 date for historical tracking purposes, but since the original date was almost ten years ago and the renewal permit will be issued in 2014, future due dates can be confusing. The historical information can be included in the TSD and would not need to be included in the permit condition. For clarification, we request that Condition C.15 be revised to either add a phrase stating that the next reporting year will be in 2017, or revised to replace the 2005 date with 2017, as shown in the examples below:

> Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, **with the next reporting year being 2017,** the Permittee shall submit by July 1 an emission statement covering the previous calendar year…
>
> Or
>
> Pursuant to 326 IAC 2-6-3(b)(2), starting in **2017** ~~2005~~ and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year…

Response to Comment 1:

While it is correct that following the issuance of this Renewal the next year an emission statement is due is 2017, conditions in Sections B and C of permit have standard language that is common to all applicable permits. IDEM OAQ cannot change this language to be specific to an individual permit or source. Condition C.15 is written to include the exact language of 326 IAC 2-6-3(b), which says "Starting in 2005, and every three (3) years thereafter..." The year indicates when emission statement reporting started. No changes were made as a result of this comment. The date of the next emission statement (July 1, 2017) was included in the TSD to the draft Renewal.

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) A typographical error misidentifying the applicable unit in Condition D.1.2 has been corrected.

. . .

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(3), the allowable particulate emission rate from the **three (3) Core Sand Bins** ~~SMC Machine~~ shall not exceed 6.54 pounds per hour when operating at a process weight rate 2.01 tons per hour.

The pounds per hour limitations were calculated by the following:

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

$E = 4.10 * P^{0.67}$

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

. . .

IDEM Contact

(a) Questions regarding this proposed Part 70 Operating Permit Renewal can be directed to Ryan Graunke 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) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

(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 Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**INTAT Precision, Inc.**
Source Location:	**2148 State Rd. 3 North, Rushville, Indiana 46173**
County:	**Rush**
SIC Code:	**3321 (Gray and Ductile Iron Foundries)**
Permit Renewal No.:	**T139-34150-00011**
Permit Reviewer:	**Ryan Graunke**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from INTAT Precision, Inc. relating to the operation of stationary gray and ductile iron foundry. On February 4, 2014, INTAT Precision, Inc. submitted an application to the OAQ requesting to renew its operating permit. INTAT Precision, Inc. was issued its first Part 70 Operating Permit (T139-7531-00011) on September 2, 2014 and its first Part 70 Operating Permit Renewal (T139-25610-00011) on November 19, 2009.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) Core production facilities, for producing cores for all three ductile iron foundry lines (Plant 1, Plant 2, Plant 2, and Line 4), consisting of:

(1) Three (3) Core Sand Bins, constructed in 1988, and using a dust collector for particulate control, identified as DC-9, and exhausting to stack No. 9;

(2) Four (4) Isocure Cold Box Core Machines, identified as P4, P5, P6, constructed in 1988, and P7, constructed in 1994, each with a maximum capacity of processing 0.5 ton of core sand per hour, 8.0 pounds of resin per ton of core sand per hour, and 1.12 pounds of DMIPA catalyst per ton of core sand, using no control, and exhausting to stacks No. 10A and 10B.

Under 40 CFR 63, Subpart EEEEE (5E), the core production facilities are considered an affected source.

<u>Plant 1</u>

(b) One (1) Ductile Iron Foundry Line, identified as Plant 1, consisting of the following:

(1) Melting and Finishing operations, all units constructed in 1988 (unless otherwise specified), consisting of:

(A) One (1) Indoor Charge Handling System, with a total maximum capacity of 20 tons of metal per hour;

Note: The maximum throughput of metal for the Charge Handling System is limited to 20 tons per hour by the Power Control System.

(B) One (1) Melting System, identified as P8, with a total maximum capacity of 20 tons of metal per hour, consisting of three (3) Electric Induction Furnaces, identified as P1, P2, and P3, each with a maximum throughput capacity of 10

tons of metal per hour, using two (2) baghouses for particulate control, identified as DC-3A and DC-3B, and exhausting to common stack No. 3;

Note: The maximum throughput of metal for the Melting System is limited to 20 tons per hour by the maximum throughput from the Indoor Charge Handling system.

(C) One (1) Holding system consisting of the following equipment:

(i) Two (2) Electric Holding Furnaces, identified as P9, each with a holding capacity of 50 tons and a total maximum throughput capacity of 100 tons of metal per hour, using no control, and exhausting indoors;

(ii) Four (4) natural gas-fired Ladle Heaters, collectively identified as P10, all constructed in 2004, using no control, and exhausting indoors:

(a) Two (2) of which are metal treatment ladle heaters, each with a maximum heat input capacity of 1.0 MMBtu/hr, and

(b) Two (2) of which are pouring ladle heaters, each with a maximum heat input capacity of 0.4 MMBtu/hr,

(D) One (1) Inoculation system, identified as P11, replaced in 2004, consisting of two (2) metal treatment ladles, each with a maximum throughput capacity of 10 tons of metal per hour, each ladle is using a baghouse (DC-3A and DC-3B) for particulate control, and exhausting to a common stack No. 3; and

Note: Baghouse DC-3A is a common control for the Melting System and Inoculation system.

(E) Seven (7) grinders, identified as Grinders 3 and 4, constructed in 1988, and Grinders 5 through 9, constructed in 2009, with a total maximum capacity of 12 tons of metal per hour, using four (4) dust collectors for particulate control, and exhausting inside the building.

Note: Grinders 3, 4, and 5 share a common dust collector, while Grinders 6 to 9 each has its own dust collector.

(2) One (1) Casting Line, identified as Casting Line 2, constructed in 2004, consisting of the following equipment:

(A) One (1) Sand System, consisting of seven (7) units, identified as P32B, P33B, P34B, P35B, P36B, P37B and P39B, with a total maximum capacity of 70 tons of sand per hour, using baghouse BH6400 for particulate control, and exhausting to stack No. 6400;

(B) One (1) Pouring station, identified as P13B, with a maximum capacity of 15 tons of metal poured per hour, using baghouse DC-3B for particulate control, and exhausting to stack No. 3;

Note: Baghouse DC-3B is a common control for the Melting System, Inoculation system, and Pouring Station.

(C) One (1) Cooling line, identified as P14B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control, and exhausting to stack No. 6200;

(D) One (1) Shakeout unit, identified as P16B, with a maximum capacity of 15 tons of metal per hour, using baghouse BH6200 for particulate control and an advanced oxidation system for VOC control, and exhausting to stack No. 6200;

(E) One (1) Bad Heat Shakeout unit controlled by baghouse DC-5, and exhausting to stack No. 5;

Note: An advanced oxidation system is used in conjunction with Plant 1 casting line to reduce VOC emissions from the Pouring station, Cooling line, and Shakeout units through acoustic sonication and the incorporation of ozone and hydrogen peroxide in the water supply to the muller.

(F) Casting Conveyors and Desprue operations, identified as P17B, P18B, P19B, P20B, P21B and P22B, with a maximum capacity of 15 tons of metal per hour, using three (3) baghouses for particulate control, DC-7 and DC-8B, both exhausting inside the building, and BH6200, exhausting to stack No. 6200; and

Note: Baghouse BH6200 is common control for the Cooling line, Shakeout unit, Casting Conveyors, and Desprue operations.

(G) Three (3) Shotblast units, identified as P40, P41 and P42, each with a maximum capacity of 5.3 tons of metal per hour and a total maximum capacity of 9.0 tons of metal per hour, all shotblasting units using baghouse DC-8B for particulate control, and exhausting inside the building.

Note: Baghouse DC-8B is common control for the Casting Conveyors, Desprue operations, and Shotblast units.

(3) One (1) Shotblast unit, identified as Wheelabrator MeshBelt Blast, constructed in 2001, with a maximum capacity of 11.0 tons of metal per hour, using baghouse DC-13 for particulate control, and exhausting internally.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 1 is considered an affected source.

Plant 2

(c) One (1) Ductile Iron Foundry Line, all units constructed in 1997 (unless otherwise specified), identified as Plant 2, consisting of the following:

(1) One (1) Indoor Charge Handling system, identified as 1000A, modified in 2013, with a nominal capacity of 20 tons of metal per hour, using no control, and exhausting indoors;

Note: This Indoor Charge Handling system (1000A) is common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(2) One (1) Ductile Iron Conversion Station, identified as 1150, modified in 2013, with a nominal capacity of 25 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: This Ductile Iron Conversion Station (1150) is common for the Ductile Iron Foundry Lines identified as Plant 2 and Line 4.

(3) One (1) Melting System, identified as 1110, modified in 2013, consisting of two (2) Electric Induction Furnaces, each with a nominal capacity of 10 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: These electric induction furnaces (1110) are common for the Ductile Iron Foundry Lines, identified as Plant 2 and Line 4.

(4) One (1) Electric Holding Furnace, with a maximum capacity of 10 tons of metal per hour, using no control, and exhausting indoors

(5) Two (2) natural gas-fired Ladle Heaters, identified as 6600 and 6610, each with a maximum heat input rate of 2.0 MMBtu per hour, using no control, and exhausting indoors;

(6) One (1) Pouring Station, identified as 2000, modified in 2013 to increase maximum throughput, with a nominal capacity of 20 tons of metal per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

(7) One (1) Mold Machine, identified as 2010, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6010 for particulate control, and exhausting to stack No. 6010;

Note: Baghouse BH6010 is a common control for the Ductile Iron Conversion Station (1150), Electric Induction Furnaces (1110), Pouring Station (2000), and Mold Machine (2010)

(8) One (1) Casting Conveyor System and one (1) Cooling Conveyor System, identified as 2015 and 2020, respectively, modified in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6020 and BH6030 for particulate control, and exhausting to stack No. 6020, 6030A and 6030B;

(9) One (1) Casting Shakeout System, identified as 3010, replaced in 2009, with a maximum capacity of 10 tons of metal per hour and 70 tons of sand per hour, using baghouse BH6030 for particulate control, and exhausting to stack No. 6030A and 6030B;

(10) One (1) Sand and Waste Sand Handling System, identified as 4000, 4140 and 5000, with a maximum capacity of 70 tons of sand per hour, using baghouses BH6020 and BH6040 for particulate control, and exhausting to stack No. 6020 and 6040;

Note: Baghouse BH6020 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), and Sand and Waste Sand Handling System (4000, 4140, 5000).

(11) One (1) Shotblast unit, identified as Final Blast 3090, with a maximum capacity of 10 tons of metal per hour, using baghouse BH6030, and exhausting to stack No. 6030A and 6030B; and

Note: Baghouse BH6030 is a common control for Casting Conveyor System (2015) Cooling Conveyor System (2020), Casting Shakeout System (3010), and Final Blast 3090.

(12) One (1) Finishing operation consisting of trim presses, identified as 8000, with a maximum capacity of 5.5 tons of metal per hour, using no control, and exhausting indoors.

(13) Six (6) Bench Grinders, modified in 2013, with a total nominal capacity of 5.5 tons of metal per hour, exhausting inside/outside the building, and consisting of the following:

(A) Cells 1 and 2, using fabric filter AAF for particulate control;

(B) Cell 3, using fabric filter DC#3 for particulate control;

(C) Cell 4, controlled by fabric filter DC#4 for particulate control;

(D) Cell 11, controlled by fabric filter DC#1 for particulate control; and

(E) Cell 12 controlled by Aercology #1.

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2 is considered an affected source.

Line 4 in Plant 2

(d) One (1) Ductile Iron Foundry Line, all units constructed in 2013 (unless otherwise specified), identified as Plant 2, Line 4, consisting of the following:

(1) One (1) Electric Induction Furnace, identified as EU-N1, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N1A for particulate control, and exhausting to Stack S-N1.

(2) One (1) Sand Handling System, identified as EU-N2A, and one (1) Return Sand Handling System, identified as EU-N2B, with a nominal capacity of 75 tons of sand per hour, both systems using Baghouse DC-N1B for particulate control, exhausting to Stack S-N1.

(3) One (1) Pouring Station, identified as EU-N3, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and mold vent ignition system for VOC control, and exhausting to Stack S-N2.

(4) One (1) Cooling Line, identified as EU-N4, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(5) One (1) Casting Shakeout System, identified as EU-N5, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(6) One (1) Bad Heat Shakeout System, identified as EU-N5A, with a nominal capacity of 10 tons of metal per hour, using Baghouse DC-N2 for particulate control, and exhausting to Stack S-N2.

(7) One (1) Shot Blast Unit, identified as EU-N6, with a nominal capacity of 15 tons of metal per hour, using Baghouse DC-N2 for particulate control and exhausting to Stack S-N2.

Note: Baghouse DC-N2 is common control for the Pouring Station (EU-N3), Cooling Line (EU-N4), Casting Shakeout system (EU-N5), Bad Heat Shakeout system (EU-N5A) and Shot Blast unit (EU-N6).

Under 40 CFR 63, Subpart EEEEE (5E), Plant 2, Line 4 is considered an affected source.

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

There are no units that have been constructed and/or operated without a permit.

Emission Units and Pollution Control Equipment Removed From the Source

During the review of the draft Title V renewal, the source has informed IDEM the removal of the following emission unit. The PTE of the entire source due to the removal of the unit has been revised, and any associated applicable requirements were also removed from the proposed renewal.

(a) One (1) Paint Booth, identified as CO5, constructed in 2005, used for machine part maintenance coating operations, with a maximum throughput rate of 120 metal units per hour, using dry filters for particulate control, exhausting inside the building or through stack No. SCO5;

Insignificant Activities

The source also consists of the following specifically regulated insignificant activities:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:

(1) Two (2) natural gas-fired boilers, identified as P40 and P41, constructed in 1988, with a maximum heat capacity of 0.9 and 1.2 million Btu per hour, respectively;

(b) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6: maintenance parts cleaner using mineral spirits solvent that is 100% recycled, with a maximum throughput of 120 gallons per 12 months;

(c) Six (6) Scrap Bays, identified as P47 through P52, each with PM emissions of approximately 0.16 pound per hour;

(d) Maintenance shop operations, identified as P58 and P59, each with PM emissions of approximately 0.1 pounds per hour;

(e) Two (2) Collector Penthouses, identified as P53 and P54, each with PM emissions of approximately 0.16 pounds per hour;

(f) One (1) Material Separator (baghouse fallout collection), with PM emissions approximately 0.6 pounds per hour;

(g) One (1) 429 hp diesel-fired emergency generator located in Plant 1, identified as EG1, and installed in 1989;

Under 40 CFR 63, Subpart ZZZZ, EG1 is considered an existing stationary RICE.

(h) One (1) 469 hp diesel-fired emergency generator located in Plant 2, identified as EG2, and installed in 1998; and

Under 40 CFR 63, Subpart ZZZZ, EG2 is considered an existing stationary RICE.

(i) One (1) 469 hp diesel-fired emergency generator located in Plant 2, Line 4, identified as EG3, and approved for construction in 2013.

Under 40 CFR 63, Subpart ZZZZ, EG3 is considered a new stationary RICE.

Under 40 CFR 60, Subpart IIII, EG3 is considered an affected source.

The source also consists of the following insignificant activities not specifically regulated:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:

(1) One (1) natural gas-fired heater to dry scrap metal in Plant 1, rated at 1.0 MMBtu per hour.

(2) One (1) natural gas-fired heater, identified as P50, located in Plant 1, rated at 2.5 MMBtu per hour.

(b) Combustion source flame safety purging on startup;

(c) Vessels storing the following: lubricating oils, hydraulic oils, machining oils, and machining fluids.

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

(e) Application of oils, greases, lubricants, and nonvolatile materials as temporary protective coatings.

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

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

(h) Filter or coalescer media changeout.

(i) Two (2) Sand Towers for the gray and ductile iron foundry line, identified as P55 and P56, constructed in 1988 (emissions are included in sand handling calculations);

(j) Other activities:

(1) One (1) scrap yard; and

(2) Two (2) fixed roof resin storage tanks, each with a maximum storage capacity of 2,000 gallons.

Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal (T139-25610-00011) on November 19, 2009, the source has constructed or has been operating under the following additional approvals:

(a) Significant Permit Modification No. (139-30099-00011) issued on April 14, 2011;

(b) Significant Permit Modification No. (139-31528-00011) issued on August 29, 2012;

(c) Significant Source Modification No. (139-32540-00011) issued on May 22, 2013;

(d) Significant Permit Modification No. (139-32559-00011) issued on June 10, 2013;

(e) Minor Source Modification No. (139-33625-00011) issued on November 26, 2013; and

(f) Significant Permit Modification No. (139-33789-00011) issued on February 6, 2014.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Rush County.

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

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Rush County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

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

Fugitive Emissions

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

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	12,017
PM_{10}	3,415
$PM_{2.5}$	3,025
SO_2	5.40
NO_x	50.34
VOC	271.9
CO	1,346
GHGs as CO_2e	8,988
Single HAP	372.5 - Manganese
Total HAP	528.2

HAPs	**tons/year**
Manganese	372.5
Lead	67.6
Other metal HAPs	37.7
Organic HAPs	50.4
Total	**528.2**

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM_{10}, $PM_{2.5}$, VOC, and CO is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

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

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

Potential to Emit After Issuance

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

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}***	**$PM_{2.5}$****	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs (as CO_2e)**
1988 - Original Plant Construction								
Core production (Core sand bins)	10.77	10.77	N/A	-	-	-	-	-
Core production (Isocure cold box core machines - P4, P5, P6, P7)	-	-	-	0.33	32.85	23.83	-	-
Indoor charge handling	1.05	1.05	N/A	-	-	-	-	-
Melting system - 3 electric induction furnaces (P8)	7.90	7.90	N/A	-	-	-	-	-
Holding system - electric holding furnace (P9)	3.95	3.95	N/A	-	-	-	-	-
Grinders (3,4)	7.9	7.9	N/A	-	-	-	-	-
Total for Original Equipment	**35.2**	**35.2**	**N/A**	**0.3**	**32.9**	**23.8**	**-**	**-**
PSD Major Source Thresholds	100	100	100	100	100	100	100	-
Subject to Regulation	-	-	-	-	-	-	-	100,000
1997 Modification (CP #139-8845-00011) - Plant 2 Construction								
Indoor charge handling (1000A)	0.5	0.5	N/A	-	-	-	-	-
Conversion Station (1150)	15.4	15.4	N/A	-	-	24.6	-	-
Electric induction furnaces (1110)				-	-		-	-
Electric holding furnace	3.1	3.1	N/A	-	-		-	-
Pouring station (2000)	***	***	N/A	1.75	0.88		98.4	876
Mold machine (2010)	***	***	N/A	-	-			
Casting conveyor system (2015)	44.6	44.6	N/A	-	-			
Cooling conveyor system (2020)				-	-			
Casting shakeout system (3010)				-	-			
Shotblast unit (Final blast 3090)				-	-	-	-	-
Sand waste and sand handling (4000,4140, 5000)	34.4	34.4	N/A	-	-	-	-	-
Finish trim presses (8000)	1.45	1.45	N/A	-	-	-	-	-
Bench grinders (Cells 1,2,3,4,11,12)				-	-	-	-	-
Ladle heaters (6600, 6610)	0.03	0.13	N/A	0.01	1.72	0.09	1.44	2,073
Total for Modification	**99.5**	**99.6**	**N/A**	**1.8**	**2.6**	**24.7**	**99.8**	**2,949**
PSD Major Source Thresholds	100	100	100	100	100	100	100	-
Subject to Regulation	-	-	-	-	-	-	-	100,000
2001 Modification - Wheelabrator MeshBelt blast unit construction								
Wheelabrator blast unit	25.0	14.9	N/A	-	-	-	-	-
Total for Modification	**25.0**	**14.9**	**N/A**				**-**	**-**
Significant Thresholds	25	15	10	40	40	40	100	75,000
2004 Modification - Plant 1 Casting Line Construction, Inoculation system (P11) replacement								
Ladle heaters (P10)	0.02	0.09	N/A	0.01	1.20	0.07	1.01	1,451
Inoculation - metal treatment ladles (P11)	6.72	14.92	N/A					
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	2.9	5.0	N/A					

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}***	**$PM_{2.5}$****	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs (as CO_2e)**
Pouring Station (P13B)	***	***	N/A	1.31	0.66	47.4	98.8	657
Cooling line (P14B)	7.5	12.5	N/A					
Shakeout unit (P16B)								
Bad heat shakeout unit								
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B)	1.5	2.4	N/A					
Shotblast (P40, P41, P42)	4.3	4.5	N/A					
Total for Modification	**23.0**	**39.4**	**N/A**	**1.3**	**1.9**	**47.5**	**99.8**	**2,151**
Significant Thresholds	25	15	10	40	40	40	100	75,000
2009 Modification – Griders 5, 6, 7, 8, and 9 Constructed								
Grinders 3,4,5	2.3	2.3	N/A	-	-	-	-	-
Grinder 6	1.2	1.2	N/A	-	-	-	-	-
Grinder 7	1.2	1.2	N/A	-	-	-	-	-
Grinder 8	2.3	2.3	N/A	-	-	-	-	-
Grinder 9	0.8	0.8	N/A	-	-	-	-	-
Total for Modification	**7.9**	**7.9**	**N/A**	**-**	**-**	**-**	**-**	**-**
Significant Thresholds	25	15	10	40	40	40	100	75,000
2013 Modification – Plant 2, Line 4 constructed, some existing units modified								
Electric induction furnace (EU-N1)	<25.0	<15.0	<10.0	-	-	<40.0	<100.0	-
Sand handling system (EU-N2A)				-	-			-
Return sand handling system (EU-N2B)				-	-			-
Pouring station (EU-N3)				1.31	0.66			657
Cooling line (EU-N4)				-	-			
Casting shakeout system (EU-N5)				-	-			
Bad heat shakeout system (EU-N5A)				-	-			
Shot blast unit (EU-N6)				-	-			-
Core production (Core sand bins and P4, P5, P6, P7)				-	-			-
Indoor charge handling (1000A)				-	-			-
Conversion Station (1150)				-	-			-
Electric induction furnaces (1110)				-	-			-
Pouring station (2000)				-	-			-
Bench grinders (Cells 1,2,3,4,11,12)				-	-			-
Total for Modification	**<25.0**	**<15.0**	**<10.0**	**1.3**	**0.7**	**<40.0**	**<100.0**	**657**
Significant Thresholds	25	15	10	40	40	40	100	75,000

negl. = negligible

* Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a regulated air pollutant".

**$PM_{2.5}$ listed is direct $PM_{2.5}$. $PM_{2.5}$ was not a PSD regulated pollutant prior to the 2013 modification. Therefore, no limits for $PM_{2.5}$ are included for earlier modifications

***Because some limits are for common control devices rather than emissions units, these units' limits are combined with other units.

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

(b) The source wide GHG emissions are less than one hundred thousand (<100,000) tons of CO_2 equivalent (CO_2e) emissions per year. GHG emissions do not affect the source PSD status.

(c) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

PSD History

(1) 1988 - Original Plant Construction

The original plant was constructed in 1988, except for Core production unit P7, which was constructed in 1994. The potential to emit of PM and PM_{10} was limited to less than 100 tons per year to make the source minor for PSD and render 326 IAC 2-2 not applicable. The units are limited as follows:

PSD Minor Limits -PM and PM_{10}

(a) Total PM emissions from the three (3) Core Sand Bins (Stack 9), except the emissions associated with Plant 2, Line 4, shall not exceed 0.82 pound per hour; and

(b) Total PM_{10} emissions from the three (3) Core Sand Bins (Stack 9), except the emissions associated with Plant 2, Line 4, shall not exceed 0.82 pound per hour.

Note: The limit has been revised to remove the isocure cold box core machines from the limits. PM and PM_{10} are only generated from the core sand bins, which exhaust to Stack 9. The isocure cold box core machines generate VOC, NO_x, and SO_2, and exhaust to Stacks 10A and 10B.

(c) PM and PM_{10} emissions and material throughput of the following units shall not exceed the following limits:

Process	PM Emission Limitation (lb/ton material)	PM_{10} Emission Limitation (lb/ton material)	Material throughput (ton/12 consecutive months)
Charge Handling Operations	0.24 lbs/ton metal	0.24 lbs/ton metal	79,000 tons of metal
Melting System (P8)	0.20 lbs/ton metal	0.20 lbs/ton metal	
Holding Furnace (P9)	0.10 lbs/ton metal	0.10 lbs/ton metal	

Note 1: The Charge Handling Operations limit was changed from 0.24 lb/hr to 0.24 lb/ton of metal in SPM #139-27169-00011, issued on June 5, 2009.

Note 2: A separate limit for the Holding Furnace (P9) was added in SPM #139-22744-00011, issued on December 20, 2007.

Note 3: The limited throughput was lowered from 90,000 tons per year in SPM #139-22744-00011, issued on December 20, 2007.

Note: The PM and PM_{10} emissions from the Grinders 3 and 4, constructed in 1988, were initially limited to 0.2 pounds of PM/PM_{10} per ton of metal and 90,000 tons of metal per year, which was later lowered to 79,000 tons of metal per year in SPM #139-22744-00011, issued on December 20, 2007. However, these limits were replaced in SPM #139-27169-00011 issued on June 5, 2009 when new grinding units were constructed because Grinders 3 and 4 share a common baghouse with the new Grinder 5. Grinder 3, 4, and 5 now have a single collective limit. (See 2009 modification below for these limits

The table below summarizes the potential to emit, reflecting all current limits, of the original equipment.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs (as CO_2e)**
Core production (Core sand bins)	3.59	3.59	N/A	-	-	-	-	-
Core production (Isocure cold box core machines - P4, P5, P6, P7)	-	-	-	0.33	32.85	23.83	-	-
Indoor charge handling	1.05	1.05	N/A	-	-	-	-	-
Melting system - 3 electric induction furnaces (P8)	7.90	7.90	N/A	-	-	-	-	-
Holding system - electric holding furnace (P9)	3.95	3.95	N/A	-	-	-	-	-
Total for Original Equipment	**24.9**	**24.9**	**N/A**	**0.3**	**32.9**	**23.8**	**-**	**-**
PSD Major Source Thresholds	100	100	100	100	100	100	100	-
Subject to Regulation	-	-	-	-	-	-	-	100,000 CO_2e

*$PM_{2.5}$ was not a PSD regulated pollutant at the time of this modification. Therefore, no limits for $PM_{2.5}$ were taken.

(2) 1997 Modification (CP #139-8845-00011) - Plant 2 Construction

In 1997, Plant 2 was constructed at the source under Construction Permit #139-7531-00011. This modification to an existing PSD Minor source was limited to less than 100 tons per year of PM, PM_{10}, $PM_{2.5}$ and CO and less than 25 tons per year of VOC to make the modification minor for PSD and render 326 IAC 2-2 and 326 IAC 8-1-6 not applicable. After this modification, the source became major for PSD. The units are limited as follows:

PSD Minor Limits - PM and PM_{10}, VOC, and CO

(a) PM emissions from the charge handling operation (1000A) shall not exceed 0.12 pound per hour.

(b) PM_{10} emissions from the charge handling operation (1000A) shall not exceed 0.12 pound per hour.

(c) PM and PM_{10} emissions and material throughput for the following units shall not exceed the following limits:

Control Device(s)	Emission Units (ID)	PM/ PM_{10} Emission Limitation (lb/ton material)	Material throughput (ton/12 consecutive months)
BH6010	Conversion station (1150), Induction furnaces (1110), Pouring station (2000), Mold machine (2010)	0.50 lbs/ton metal	61,500 tons of metal
N/A	Electric holding furnace	0.10 lbs/ton metal	
BH6030	Casting and cooling conveyors (2015, 2020), Casting shakeout (3010), Final blast shotblast unit (3090)	1.45 lbs/ton metal	
BH6020	Casting and cooling conveyors (2015, 2020), Sand and waste sand handling (4000, 4140, 5000)	0.11 lbs/ton sand	430,500 tons of sand
BH6040	Sand and waste sand handling (4000, 4140, 5000)	0.05 lbs/ton sand	
Fabric filters (AAF, DC#3, DC#4, DC#1, and Aerocology #1)	Finish trim presses (8000), 6 grinders (Cells 1,2,3,4,11,12)	0.06 lbs/ton metal	48,180 tons of metal

Note 1: The emission limits are for the common control device rather than individual units. These limits were modified in SPM #139-22744-00011, issued on December 20, 2007.

Note 2: The limit for BH6020 and BH6040 is based on the throughput of sand in the sand and waste sand handling system (4000, 4140, 5000).

Note 3: The final blast shotblast unit (3090) was not included in the permit until SSM #139-22701-00011 issued on December 4, 2007. This was the first limit for this unit.

Note 4: Casting and cooling conveyors (2015 and 2020) were modified and Shakeout (3010) was replaced in SSM #139-28190-00011, issued on September 1, 2009. This modification did not result in net increase in emissions. Therefore, the units did not require new emission limits and were kept under the existing 1997 PSD Minor emission limits.

Note 5: The limited throughputs of metal and sand were lowered from 70,000 and 490,000 tons per year, respecitively, in SPM #139-22744-00011, issued on December 20, 2007.

(d) VOC emissions from Melting (1110), Inoculation (1150), Pouring (2000), the Casting conveyor & Cooling Conveyor system (2015 and 2020), and the Casting Shakeout system (3010) combined shall not exceed 0.8 pound per ton of metal throughput.

Note: These limits were modified in SPM #139-22744-00011, issued on December 20, 2007.

(e) CO emissions from Pouring station (2000), Casting and cooling conveyors (2015, 2020), and Casting shakeout (3010) combined shall not exceed 3.2 pounds per ton of metal throughput.

Note: These limits were created in SPM #139-22744-00011, issued on December 20, 2007. Prior to this, CO emissions were not limited.

The table below summarizes the potential to emit, reflecting all current limits, of the 1997 modification.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_x**	**VOC**	**CO**	**GHGs (as CO_2e)**
Indoor charge handling (1000A)	0.5	0.5	N/A	-	-	-	-	-
Conversion Station (1150)	15.4	15.4	N/A	-	-	24.6	-	-
Electric induction furnaces (1110)				-	-		-	-
Electric holding furnace	3.1	3.1	N/A	-	-		-	-
Pouring station (2000)	**	**	N/A	1.75	0.88		98.4	876
Mold machine (2010)	**	**	N/A	-	-			
Casting conveyor system (2015)	44.6	44.6	N/A	-	-			
Cooling conveyor system (2020)				-	-			
Casting shakeout system (3010)				-	-			
Shotblast unit (Final blast 3090)				-	-	-	-	-
Sand waste and sand handling (4000,4140, 5000)	34.4***	34.4***	N/A	-	-	-	-	-
Finish trim presses (8000)	1.45	1.45	N/A	-	-	-	-	-
Bench grinders (Cells 1,2,3,4,11,12)				-	-	-	-	-
Ladle heaters (6600, 6610)	0.03	0.13	N/A	0.01	1.72	0.09	1.44	2,073
Total for Modification	**99.5**	**99.6**	**N/A**	**1.8**	**2.6**	**24.7**	**99.8**	**2,949**
PSD Major Source Thresholds	100	100	100	100	100	100	100	-
Subject to Regulation	-	-	-	-	-	-	-	100,000 CO_2e

* $PM_{2.5}$ was not a PSD regulated pollutant at the time of this modification. Therefore, no limits for $PM_{2.5}$ were taken.

** The limited PTE of the pouring machine (2000) and mold machine (2010) are included with the limited PTE of the conversion station (1150) and electric induction furnaces (1110) since they share a common control device (BH6010)

*** The PTE of the sand and sand handling system (4000, 4140, 5000) is the sum of the limited PTE of BH6020 and BH6040.

(3) 2001 Modification - Wheelabrator MeshBelt blast unit construction

The Wheelabrator MeshBelt blast unit was constructed in 2001. However, it was not permitted to be constructed or operated until SSM #139-22701-00011 issued on December 4, 2007 and SPM #139-22744-00011, issued on December 20, 2007. This modification to an existing PSD Major source was limited to less than 25 tons per year of PM and 15 tons per year of PM_{10} to make this modification minor for PSD and avoid 326 IAC 2-2. The unit is limited as follows:

PSD Minor Limits -PM and PM_{10}

(a) PM emissions from the Wheelabrator MeshBelt blast unit shall each not exceed 5.7 pounds per hour.

(b) PM_{10} emissions from the Wheelabrator MeshBelt blast unit shall each not exceed 3.4 pounds per hour.

The table below summarizes the potential to emit, reflecting all current limits, of the 2001 modification.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs (as CO2e)**
Wheelabrator blast unit	25.0	14.9	N/A	-	-	-	-	-
Total for Modification	**25.0**	**14.9**	**N/A**				**-**	**-**
Significant Thresholds	25	15	10	40	40	40	100	75,000 CO_2e

* $PM_{2.5}$ was not a PSD regulated pollutant at the time of this modification. Therefore, no limits for $PM_{2.5}$ were taken.

(4) 2004 Modification - Plant 1 Casting Line Construction, Inoculation system (P11) replacement

Plant 1 Casting Line was constructed in 2004 under SSM #139-17898-00011 issued on April 6, 2004. Additionally the Inoculation System for Plant 1 (P11) was replaced at this time. This modification to an existing PSD Major source was major for PM_{10} and VOC and was subject to the requirements of 326 IAC 2-2 for these pollutants. The modification was limited to less than 25 tons per year of PM and 100 tons of CO to make this modification minor for PSD and avoid 326 IAC 2-2 for PM and CO. The units are limited as follows:

BACT Limits - PM_{10}
BACT analysis for PM_{10} for these units was performed in SSM #139-17898-00011 and SPM #139-18320-00011. BACT requirements are as follows:

(a) Opacity for stack No. DC-3A, DC-3B, BH6200, BH6400, and DC-5 shall not exceed ten percent (10%) for more than three (3) consecutive six (6) minute averaging periods.

(b) The Ladle Heaters are exclusively natural gas fired and are therefore considered to meet the requirements for BACT.

(c) The Permittee shall comply with the following BACT required emission limits for PM_{10} from the Plant 1, Casting Line 2 processes (PM_{10} limits include both filterable and condensable):

Control Device	Process	Filterable PM_{10} Emission Limitation		Total PM_{10} Emission Limitation (lb/ton) (Filterable & Condensable)
		(gr/dscf)	(lb/hr)	
DC-3A	Melting (P8) & Inoculation (P11)	0.003	1.7	0.633 lb/ton metal
DC-3B	Melting (P8), Inoculation (P11) & Pouring (P13B),	0.003	1.7	
BH6400	Sand Handling (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	0.003	1.13	0.02 lb/ton sand
BH6200	Cooling (P14B), Shakeout (P16B), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.003	2.85	1.045 lb/ton metal
DC-8B (exhausts inside)	Shotblast (P40, P41, P42), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.003	1.03	0.085 lb/ton metal
DC-7 (exhausts inside)	Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.003	0.55	0.085 lb/ton metal
DC-5	Bad Heat Shakeout	0.003	0.45	0.03 lb/ton metal

Note 1: The emission limits are for the common control device rather than individual units.

Note 2: The melting system (P8) was not modified in 2004; however, this limit is on the baghouse that is common control for new units.

BACT Limits - VOC

In the 2004 modification, INTAT proposed a VOC limit of 0.8 pounds of VOC per ton of metal from pouring (P14B), cooling (P14B), shakeout and bad heat shakeout combined to limit VOC emissions to less than 25 tons per year to render 326 IAC 8-1-6 (BACT) not applicable. However, testing was conducted by INTAT in September, 2005 and the tested emission rate was higher than the 0.8 pounds of VOC per ton of metal limit. Therefore, since the source was not able to comply with the VOC limit, the potential to emit of VOCs from the pouring, cooling, shakeout and bad heat shakeout are greater than 40 tons per year and the requirements of both 326 IAC 2-2 (PSD) and 326 IAC 8-1-6 apply. BACT analysis for VOC for these units was performed in SSM #139-22701-00011 and SPM #139-22744-00011. BACT requirements are as follows:

(a) Material Substitution and Lower-Emitting Processes/Practices shall be used to limit VOC emissions.

(b) VOC emissions shall not exceed 1.2 pounds per ton of metal throughput to the Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B) and Bad Heat Shakeout operations combined.

(c) The throughput of metal to the Pouring, Cooling and Shakeout operations (P13B, P14B, and P16B) and Bad Heat Shakeout operations shall not exceed 79,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The installed Advanced Oxidation (AO) system shall be used with a minimum VOC reduction efficiency of 20%.

PSD Minor Limts – PM and CO

(a) PM emissions and material throughput from the following units shall not exceed the following limits:

Baghouse	Process	PM Emission Limitation (lb/ton material)	Material throughput (ton/12 consecutive months)
DC-3A / DC-3B	Melting (P8), Inoculation (P11), & Pouring (P13B)	0.17 lbs/ton metal poured	79,000 tons of metal
BH6200	Cooling (P14B), Shakeout (P16B), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.19 lbs/ton metal poured	
DC-8B	Shotblast (P40, P41, P42), Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.11 lbs/ton metal poured	
DC-7	Casting Conveyors & Desprue operations (P17B, P18B, P19B, P20B, P21B, P22B)	0.037 lbs/ton metal poured	
DC-5	Bad Heat Shakeout	0.03 lbs/ton metal poured	
BH6400	Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	0.016 lbs/ton sand	368,667 tons of sand

Note 1: The emission limits are for the common control device rather than individual units.

Note 2: The melting system (P8) was not modified in 2004; however, this limit is on the baghouse that is common control with the units constructed in 2004.

Note 3: These limits were modified in SPM #139-22744-00011, issued on December 20, 2007.

Note 4: In SPM # 139-30099-00011, issued on April 14, 2011, combined throughput and emissions limits for Grinders 3-9 were included with this modification. However, the Grinders were not constructed or modified in 2004. Grinders 3 and 4 were constructed in 1988 and Grinders 5, 6, 7, 8, and 9 were constructed in 2009. These limits are now included in separate limits for the 2009 modification (below).

Note 5: Prior to this Renewal, there was no limit for the bad heat shakeout unit for PM, as material either passes through the normal shakeout or bad shakeout but not both, so that only the PTE of one of the units is used for calculating the limited PTE of the modification. However, because the bad shakeout uses a different control device (DC-5) than the normal shakeout control device (DC-7) and the limits are on the control device and not the units, a limit is required for PM emissions from DC-5. The BACT limit of 0.03 pounds of PM_{10} per ton of metal will be used for the PM limit.

Note 6: The limited throughput of metal and sand was increased from 61,500 215,230 tons per year, respectively, in SPM #139-22744-00011, issued on December 20, 2007.

(b) CO emissions from Pouring (P13B), Cooling (P14B), Shakeout (P16B), and Bad Heat Shakeout combined shall not exceed 2.5 pounds per ton of metal throughput.

Note: These limits were created in SPM #139-22744-00011, issued on December 20, 2007. Prior to this, CO emissions were not limited.

The table below summarizes the potential to emit, reflecting all current limits, of the 1997 modification.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO x**	**VOC**	**CO**	**GHGs (as CO2e)**
Ladle heaters (P10)	0.02	0.09	N/A	0.01	1.20	0.07	1.01	1,451
Inoculation - metal treatment ladles (P11)	6.72	14.92	N/A					
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	2.9	5.0	N/A					
Pouring Station (P13B)	**	**	N/A	1.31	0.66	47.4	98.8	657
Cooling line (P14B)	7.5	12.5	N/A					
Shakeout unit (P16B)								
Bad heat shakeout unit								
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B)	1.5	2.4	N/A					
Shotblast (P40, P41, P42)	4.3	4.5	N/A					
Total for Modification	**23.0**	**39.4**	**N/A**	**1.3**	**1.9**	**47.5**	**99.8**	**2,151**
Significant Thresholds	25	15	10	40	40	40	100	75,000 CO_2e

*$PM_{2.5}$ was not a PSD regulated pollutant at the time of this modification. Therefore, no limits for $PM_{2.5}$ were taken.

** The limited PTE of the Pouring Station (P13B) are included with the limited PTE of the conversion Melting (P8) and Inoculation (P11) since they share a common control device (DC-3A and DC-3B)

(5) 2009 Modification – Griders 5, 6, 7, 8, and 9 Constructed

Five (5) new grinders were added to the source in at Plant 1 in 2009 under SPM #139-27169-00011, issued on May 4, 2009. These units were permitted as specifically listed insignificant activies under 326 IAC 2-7-1(21)(D)(xxiii). This modification to an existing PSD Major source was limited to less than 25 tons per year of PM and 15 tons per year of PM_{10} to make this modification minor for PSD and avoid 326 IAC 2-2. The unit is limited as follows:

PSD Minor Limits -PM and PM_{10}

(a) The combined throughput of metal for Grinders 3, 4, 5, 6, 7, 8, and 9 shall be less than 79,000 tons per 12 consecutive month period with compliance determined at the end of each month.

Note : Prior to the new grinders in 2009, the original grinders (3 and 4) were limited to less than 79,000 tons per 12 consecutive month period. The limited throughput was lowered from 90,000 tons per year in SPM #139-22744-00011, issued on December 20, 2007. The new grinders were included under these limits in SPM # 139-30099-00011, issued on

April 14, 2011. This limit was incorrectly associated with the limits to the modifications in 2004. It is now in a separate condition.

(b) PM emissions from Grinders 3, 4, 5, 6, 7, 8, and 9 combined shall not exceed 0.2 pound per ton of metal throughput.

(c) PM_{10} emissions from Grinders 3, 4, 5, 6, 7, 8, and 9 combined shall not exceed 0.2 pound per ton of metal throughput.

Note: Prior to the new grinders in 2009, the original grinders (3 and 4) were limited to 0.2 pounds of PM and PM_{10} per ton of metal throughput. The new grinders were included under these limits in SPM # 139-30099-00011, issued on April 14, 2011. These limits were incorrectly associated with the limits to the modifications in 2004. They are now in a separate condition.

(d) Emissions of PM and PM_{10} from the grinding process shall not exceed the following

Process	PM Emission Limitation (lb/hour)	PM_{10} Emission Limitation (lb/hour)
Grinders 3,4,5	0.53	0.53
Grinder 6	0.28	0.28
Grinder 7	0.28	0.28
Grinder 8	0.53	0.53
Grinder 9	0.18	0.18

Note 1: These limits were established in SPM #139-27169-00011, issued on April 14, 2011, by extrapolated the combined throughput limits (79,000 tons per year) and emission limit (0.2 pounds per ton of metal throughput) to the individual grinder control devices based on the ratio of the air flow of each dust collector to the total air flow of all dust collectors.

Note 2: Grinders 3 and 4 were constructed in 1988 and were not modified in 2004; however, this limit is on the baghouse that is common control for Grinders 3 and 4 and Grinder 5 constructed in 2004.

Note 3: These limits were incorrectly associated with the limits to the original 1988 equipment. They are now in a separate condition.

The table below summarizes the potential to emit, reflecting all current limits, of the 1997 modification.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO x**	**VOC**	**CO**	**GHGs (as CO2e)**
Grinders 3,4,5	2.3	2.3	N/A	-	-	-	-	-
Grinder 6	1.2	1.2	N/A	-	-	-	-	-
Grinder 7	1.2	1.2	N/A	-	-	-	-	-
Grinder 8	2.3	2.3	N/A	-	-	-	-	-
Grinder 9	0.8	0.8	N/A	-	-	-	-	-
Total for Modification	**7.9**	**7.9**	**N/A**	**-**	**-**	**-**	**-**	**-**
Significant Thresholds	25	15	10	40	40	40	100	75,000 CO_2e

*$PM_{2.5}$ was not a PSD regulated pollutant at the time of this modification. Therefore, no limits for $PM_{2.5}$ were taken.

(6) 2013 Modification – Plant 2, Line 4 constructed, some existing units modified

Plant 2, Line 4 was constructed in 2013 under SPM #139-32559-00011, issued on June 10, 2013. This also included the modification to increase the capacity of several existing units to send a portion of their throughput to Plant 2, Line 4. These modified existing units were the core production process, indoor change handling (1000A), Conversion Station (1150), Induction Furnaces (1110), and the six (6) Plant 2 grinders (Cells 1, 2, 3, 4, 11, and 12). Plant 2 Pouring Station (2000) also increased its capacity in this modification, but does not send any material to Plant 2, Line 4. The source took modification-wide limits to make this modification minor for PSD and avoid 326 IAC 2-2, as follows:

The following emission units constructed in 2013 or portion of emission units modified in 2013 shall be limited as follows

Line(s)	Emission Unit (ID)	Portion of throughput subject to limit
Plant 2, Line 4 (New units)	Electric induction furnace (EU-N1)	Entire unit
	Sand handling system (EU-N2A)	Entire unit
	Return sand handling system (EU-N2B)	Entire unit
	Pouring station (EU-N3)	Entire unit
	Cooling line (EU-N4)	Entire unit
	Casting shakeout system (EU-N5)	Entire unit
	Bad heat shakeout system (EU-N5A)	Entire unit
	Shot blast unit (EU-N6)	Entire unit
Plant 2 and Plant 2, Line 4 (Modified units)	Core sand bins and isocure cold box core machines (P4, P5, P6, P7)	Portion sent to Line 4
	Indoor change handling (1000A)	Portion sent to Line 4
	Conversion Station (1150)	Portion sent to Line 4
	Induction Furnaces (1110)	Portion sent to Line 4
	Six (6) grinders (Cells 1, 2, 3, 4, 11, and 12)	Portion sent to Line 4

(a) The PM emissions shall be less than 25 tons per twelve consecutive month period, with compliance determined at the end of each month.

(b) The PM_{10} emissions shall be less than 15 tons per twelve consecutive month period, with compliance determined at the end of each month.

(c) The $PM_{2.5}$ emissions shall be less than 10 tons per twelve consecutive month period, with compliance determined at the end of each month.

(d) The Lead emissions shall be less than 0.6 tons per twelve consecutive month period, with compliance determined at the end of each month.

(e) The VOC emissions shall be less than 40 tons per twelve consecutive month period, with compliance determined at the end of each month.

(f) The CO emissions shall be less than 100 tons per twelve consecutive month period, with compliance determined at the end of each month.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO x**	**VOC**	**CO**	**GHGs (as CO2e)**
Electric induction furnace (EU-N1)	<25.0	<15.0	<10.0	-	-	<40.0	<100.0	-
Sand handling system (EU-N2A)				-	-			-
Return sand handling system (EU-N2B)				-	-			-
Pouring station (EU-N3)				1.31	0.66			657
Cooling line (EU-N4)				-	-			
Casting shakeout system (EU-N5)				-	-			
Bad heat shakeout system (EU-N5A)				-	-			
Shot blast unit (EU-N6)				-	-			-
Core production (Core sand bins and P4, P5, P6, P7)				-	-			-
Indoor charge handling (1000A)				-	-			-
Conversion Station (1150)				-	-			-
Electric induction furnaces (1110)				-	-			-
Pouring station (2000)				-	-			-
Bench grinders (Cells 1,2,3,4,11,12)				-	-			-
Total for Modification	**<25.0**	**<15.0**	**<10.0**	**1.3**	**0.7**	**<40.0**	**<100.0**	**657**
Significant Thresholds	25	15	10	40	40	40	100	75,000 CO_2e

Note 1: Compliance with these limits is based on emission factors (in pounds of pollutant per ton of metal or sand) established during the most recent stack test and the amount of material throughput used in Line 4 (except for Pouring Station (2000)). For the calculating emissions from the indoor charge handling (1110), the limited emission rate of 0.12 pounds per hour of PM and PM_{10} (and an assumed 60% of this as $PM_{2.5}$ or 0.072 pounds of $PM_{2.5}$ per hour) and the hours this unit feed metals to Line 4 is used.

Note 2: Pouring Station (2000) was modification in 2013 by increasing the maximum potential throughout. However, as determined in SPM #139-32559-00011, issued on June 10, 2013, this increase does However, there will be no change in the existing throughput limit for this Pouring Station and this Pouring Station will not be used for the proposed Line 4.

Federal Rule Applicability

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

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

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

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

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

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Core production - PM	Yes	Yes	<100	-	100	No	-
Core production - PM_{10}	Yes	Yes	<100	-	100	No	-
Core production - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Melting system - 3 electric induction furnaces (P8) - PM	Yes	Yes	<100	-	100	No	-
Melting system - 3 electric induction furnaces (P8) - PM_{10}	Yes	Yes	<100	-	100	No	-
Melting system - 3 electric induction furnaces (P8) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Inoculation - metal treatment ladles (P11) - PM	Yes	Yes	>100	<100	100	Yes	No
Inoculation - metal treatment ladles (P11) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Inoculation - metal treatment ladles (P11) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Grinders (3,4,5,6,7,8,9) - PM	Yes	Yes	>100	<100	100	Yes	No
Grinders (3,4,5,6,7,8,9) - PM_{10}	Yes	Yes	<100	-	100	No	-
Grinders (3,4,5,6,7,8,9) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B) - PM	Yes	Yes	>100	<100	100	Yes	No
Sand System (P32B, P33B, P34B, P35B, P36B, P37B,	Yes	Yes	>100	<100	100	Yes	No

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
P39B) - PM_{10}							
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Pouring Station (P13B) - PM	Yes	Yes	>100	<100	100	Yes	No
Pouring Station (P13B) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Pouring Station (P13B) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Pouring Station (P13B) - VOC	Yes	Yes	<100	-	100	Yes	No
Cooling line (P14B) - PM	Yes	Yes	<100	-	100	No	-
Cooling line (P14B) - PM_{10}	Yes	Yes	<100	-	100	No	-
Cooling line (P14B) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Cooling line (P14B) - VOC	Yes	Yes	<100	-	100	Yes	No
Shakeout unit (P16B) - PM	Yes	Yes	>100	<100	100	Yes	No
Shakeout unit (P16B) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Shakeout unit (P16B) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Shakeout unit (P16B) - VOC	Yes	Yes	<100	-	100	Yes	No
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B) - PM	Yes	Yes	<100	-	100	No	-
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B) - PM_{10}	Yes	Yes	<100	-	100	No	-
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Shotblast (P40, P41, P42) - PM (each)	Yes	Yes	>100	<100	100	Yes	No
Shotblast (P40,	Yes	Yes	<100	-	100	No	-

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
P41, P42) - PM_{10} (each)							
Shotblast (P40, P41, P42) - $PM_{2.5}$ (each)	Yes	No	-	-	100	No	-
Wheelabrator - PM	Yes	Yes	>100	<100	100	Yes	No
Wheelabrator - PM_{10}	Yes	Yes	<100	-	100	No	-
Wheelabrator - $PM_{2.5}$	Yes	No	-	-	100	No	-
Conversion Station (1150) - PM	Yes	Yes	>100	<100	100	Yes	No
Conversion Station (1150) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Conversion Station (1150) - $PM_{2.5}$	Yes	Yes	>100	<100	100	Yes	No
Electric induction furnaces (1110) - PM	Yes	Yes	<100	-	100	No	-
Electric induction furnaces (1110) - PM_{10}	Yes	Yes	<100	-	100	No	-
Electric induction furnaces (1110) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Pouring station (2000) - PM	Yes	Yes	>100	<100	100	Yes	No
Pouring station (2000) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Pouring station (2000) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Mold machine (2010) - PM	Yes	Yes	<100	-	100	No	-
Mold machine (2010) - PM_{10}	Yes	Yes	<100	-	100	No	-
Mold machine (2010) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Casting conveyor system (2015) - PM	Yes	Yes	<100	-	100	No	-
Casting conveyor system (2015) - PM_{10}	Yes	Yes	<100	-	100	No	-
Casting conveyor system (2015) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Cooling conveyor	Yes	Yes	<100	-	100	No	-

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
system (2020) - PM							
Cooling conveyor system (2020) - PM_{10}	Yes	Yes	<100	-	100	No	-
Cooling conveyor system (2020) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Casting shakeout system (3010) - PM	Yes	Yes	>100	<100	100	Yes	No
Casting shakeout system (3010) - PM_{10}	Yes	Yes	<100	-	100	No	-
Casting shakeout system (3010) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Sand waste and sand handling (4000,4140, 5000) - PM	Yes	Yes	>100	<100	100	Yes	No
Sand waste and sand handling (4000,4140, 5000) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Sand waste and sand handling (4000,4140, 5000) - $PM_{2.5}$	Yes	No	-	-	100	No	-
Shotblast unit (Final blast 3090) - PM	Yes	Yes	>100	<100	100	Yes	No
Shotblast unit (Final blast 3090) - PM_{10}	Yes	Yes	<100	-	100	No	-
Shotblast unit (Final blast 3090)	Yes	No	-	-	100	No	-
Bench grinders (Cells 1,2,3,4,11,12) - PM	Yes	Yes	>100	<100	100	Yes	No
Bench grinders (Cells 1,2,3,4,11,12) - PM_{10}	Yes	Yes	<100	-	100	No	-
Bench grinders (Cells 1,2,3,4,11,12) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Electric induction furnace (EU-N1) -	Yes	Yes	<100	-	100	No	-

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
PM							
Electric induction furnace (EU-N1) - PM_{10}	Yes	Yes	<100	-	100	No	-
Electric induction furnace (EU-N1) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Sand handling system (EU-N2A) - PM	Yes	Yes	>100	<100	100	Yes	No
Sand handling system (EU-N2A) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Sand handling system (EU-N2A) - $PM_{2.5}$	Yes	Yes	>100	<100	100	Yes	No
Return sand handling system (EU-N2B) - PM	Yes	Yes	>100	<100	100	Yes	No
Return sand handling system (EU-N2B) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Return sand handling system (EU-N2B) - $PM_{2.5}$	Yes	Yes	>100	<100	100	Yes	No
Pouring station (EU-N3) - PM	Yes	Yes	>100	<100	100	Yes	No
Pouring station (EU-N3) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Pouring station (EU-N3) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Cooling line (EU-N4) - PM	Yes	Yes	<100	-	100	No	-
Cooling line (EU-N4) - PM_{10}	Yes	Yes	<100	-	100	No	-
Cooling line (EU-N4) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Casting shakeout system (EU-N5) - PM	Yes	Yes	>100	<100	100	Yes	No
Casting shakeout system (EU-N5) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Casting shakeout system (EU-N5) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Bad heat shakeout system (EU-N5A) - PM	Yes	Yes	>100	<100	100	Yes	No
Bad heat shakeout system (EU-N5A)	Yes	Yes	>100	<100	100	Yes	No

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
- PM_{10}							
Bad heat shakeout system (EU-N5A) - $PM_{2.5}$	Yes	Yes	<100	-	100	No	-
Shot blast unit (EU-N6) - PM	Yes	Yes	>100	<100	100	Yes	No
Shot blast unit (EU-N6) - PM_{10}	Yes	Yes	>100	<100	100	Yes	No
Shot blast unit (EU-N6) - $PM_{2.5}$	Yes	Yes	>100	<100	100	Yes	No

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

(1) Inoculation station (P11) for PM and PM_{10}
(2) Grinders (3,4,5,6,7,8,9) for PM
(3) Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B) for PM and PM_{10}
(4) Pouring Station (P13B) for PM and PM_{10}
(5) Cooling line (P14B) - VOC
(6) Shakeout unit (P16B) for PM and PM_{10}
(7) Shotblast (P40, P41, P42) for PM
(8) Wheelabrator for PM
(9) Conversion Station (1150) for PM, PM_{10}, and $PM_{2.5}$
(10) Pouring station (2000) for PM and PM_{10}
(11) Casting shakeout system (3010) for PM
(12) Sand waste and sand handling (4000,4140, 5000) for PM and PM_{10}
(13) Shotblast unit (Final blast 3090) for PM
(14) Bench grinders (Cells 1,2,3,4,11,12) for PM
(15) Sand handling system (EU-N2A) for PM, PM_{10}, and $PM_{2.5}$
(16) Return sand handling system (EU-N2B) for PM, PM_{10}, and $PM_{2.5}$
(17) Pouring station (EU-N3) for PM and PM_{10}
(18) Casting shakeout system (EU-N5) for PM and PM_{10}
(19) Bad heat shakeout system (EU-N5A) for PM and PM_{10}
(20) Shot blast unit (EU-N6) for PM, PM_{10}, and $PM_{2.5}$

All other units and pollutants not listed in the table above have no control devices, therefore CAM does not apply.

New Source Performance Standards (NSPS)

(b) The requirements of the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subparts Dc) are still not included in the permit because the boilers, identified as P40 and P41, were constructed prior to June 9, 1989 and each has a heat input capacity less than 10 MMBtu/hr.

(c) The diesel-fired emergency generator is subject to the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII (4I)), which is incorporated by reference as 326 IAC 12, because this unit is a stationary compression ignition internal combustion engine constructed after July 11, 2005 and manufactured after April 1, 2006.

The following unit is subject to this rule:

One (1) 469 hp diesel-fired emergency generator located in Plant 2, Line 4, identified as EG3, and approved for construction in 2013.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.4200(a)(2)
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4209(a)
(6) 40 CFR 60.4211(a), (c), and (f)
(7) 40 CFR 60.4214(b)
(8) 40 CFR 60.4218
(9) 40 CFR 60.4219

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these facilities except as otherwise specified in 40 CFR 60, Subpart IIII (4I).

There are no applicable performance testing requirements for this NSPS.

This is an existing requirement for the source and no changes have been made in this renewal.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(d) This source is still subject to the NESHAP for Hazardous Air Pollutants for Iron and Steel Foundries (40 CFR Part 63, Subpart EEEEE (5E)), which is incorporated by reference as 326 IAC 20-92, because the source is a grey and ductile steel foundry and is a major source of HAPs

The following units are subject to this rule:

(1) Core making facilites;

(2) Ductile iron foundy line (Plant 1);

(3) Ductile iron foundy line (Plant 2); and

(4) Ductile iron foundy line (Plant 2, Line 4).

The source is subject to the following portions of Subpart EEEEE (5E):

(1) 40 CFR 63.7680
(2) 40 CFR 63.7681
(3) 40 CFR 63.7682
(4) 40 CFR 63.7683(a),(b),(f)
(5) 40 CFR 63.7690(a)(1)(i),(5)(i),(7)
(6) 40 CFR 63.7700(a),(b)
(7) 40 CFR 63.7710(a),(b)(1),(3) through (6)
(8) 40 CFR 63.7720
(9) 40 CFR 63.7730(a),(b)
(10) 40 CFR 63.7731
(11) 40 CFR 63.7732(a),(b)(1),(2),(4);(c)(1),(2),(4);(d);(h)
(12) 40 CFR 63.7733(a),(e),(f)
(13) 40 CFR 63.7734(a)(1)(i),(5)(i),(7);(b)(1)
(14) 40 CFR 63.7735(a)

(15) 40 CFR 63.7736(c), (d)
(16) 40 CFR 63.7740(b)
(17) 40 CFR 63.7741(b)
(18) 40 CFR 63.7742
(19) 40 CFR 63.7743(a)(1)(i),(5)(i),(7),(12);(c)
(20) 40 CFR 63.7744(a)
(21) 40 CFR 63.7745
(22) 40 CFR 63.7746
(23) 40 CFR 63.7750(a),(b),(d),(e)
(24) 40 CFR 63.7751
(25) 40 CFR 63.7752(a),(c)
(26) 40 CFR 63.7753
(27) 40 CFR 63.7760
(28) 40 CFR 63.7761
(29) 40 CFR 63.7765
(30) Table 1 to Subpart EEEEE of Part 63

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart EEEEE (5E).

There are no applicable performance testing requirements for this NESHAP.

This is an existing requirement for the source and no changes have been made in this renewal.

(e) The three (3) diesel-fired emergency generators, identified as EG1, EG2, and EG3, are subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ (4Z)), which is incorporated by reference as 326 IAC 20-82, because these units are stationary reciprocating internal combustion engines.

EG1 and EG2 are considered existing stationary RICE because they have a site rating less than 500 brake HP, located at major source of HAPs, and were constructed before June 12, 2006. EG3 is considered a new stationary RICE.

The following unit is subject to this rule:

(1) One (1) 429 hp diesel-fired emergency generator located in Plant 1, identified as EG1, and installed in 1989;

(2) One (1) 469 hp diesel-fired emergency generator located in Plant 2, identified as EG2, and installed in 1998; and

(3) One (1) 469 hp diesel-fired emergency generator located in Plant 2, Line 4, identified as EG3, and approved for construction in 2013.

Applicable portions of the NESHAP are the following for EG1 and EG2:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(i)
(4) 40 CFR 63.6595(a)(1)
(5) 40 CFR 63.6602
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(2)
(8) 40 CFR 63.6640(f)(1)
(9) 40 CFR 63.6645(a)(5)

(10) 40 CFR 63.6655(e)(2)
(11) 40 CFR 63.6660
(12) 40 CFR 63.6665
(13) 40 CFR 63.6670
(14) 40 CFR 63.6675

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the EG1 and EG2 except when otherwise specified in 40 CFR 63 Subpart ZZZZ (4Z).

Applicable portions of the NESHAP are the following for EG3:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(c)(6)

Pursuant to 40 CFR 63.6665, EG3 does not have to meet the requirements of 40 CRF 63, Subpart A (General Provisions), since it is considered a new stationary RICE with a site rating of less than 500 brake HP located at a major source of HAP emissions.

There are no applicable performance testing requirements for this NESHAP.

This is an existing requirement for the source and no changes have been made in this renewal.

State Rule Applicability - Entire Source

(a) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
PSD applicability is discussed under the Potential to Emit After Issuance section above.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs))
Purusant to 326 IAC 2-4.1-1(b)(2), the source is not subject to 326 IAC 2-4.1 because all units with a potential to emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs are subject to 40 CFR 63 Subpart EEEEE, which is a standard issued pursuant to Section 112(d), 112(h), or 112(j) of the CAA.

(c) 326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM_{10} is less than 250 tons per year; and the potential to emit of CO, NO_x, and SO_2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2017 and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

(d) 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.

(e) 326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(f) 326 IAC 6.8 PM Limitations for Lake County
This source is not subject to 326 IAC 6.5 because it is not located in Lake County.

(g) 326 IAC 6-4 (Fugitive Dust Emissions)
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.

(h) 326 IAC 6-5 (Fugitive Particulate Matter Limitations)
The source is not subject to the requirements of 326 IAC 6-5 because it has potential fugitive particulate matter emissions less than twenty-five (25) tons per year.

State Rule Applicability – Individual Facilities

Core production, Ductile Iron Foundry lines

(a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e)(3), the allowable particulate emission rate from the facilities listed below shall be limited as specified when operating at the respective process weight rate:

Emission unit/process (Unit ID)	Dust collector/ Baghouse	Process Weight Rate (ton/hr)	Allowable emissions (lb/hr)
Core production (Core sand bins and P4, P5, P6, P7)	Dust collector	2.01	6.54
Indoor charge handling	No control	20	30.51
Melting system - 3 electric induction furnaces (P8)	DC-3A and DC-3B	20	30.51
Holding system - electric holding furnace (P9)	No control	20	30.51
Inoculation - metal treatment ladles (P11)	DC-3A and DC-3B	20	30.51
Grinder 3	Dust collector	1.25	4.76
Grinder 4	Dust collector	1.25	4.76
Grinder 5	Dust collector	1.25	4.76
Grinder 6	Dust collector	1.25	4.76
Grinder 7	Dust collector	1.25	4.76
Grinder 8	Dust collector	3.75	9.96
Grinder 9	Dust collector	1.25	4.76
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	BH6400	70*	47.77
Pouring Station (P13B)	DC-3B	85*	49.66
Cooling line (P14B)	BH6200	85*	49.66
Shakeout unit (P16B)	BH6200	85*	49.66
Bad heat shakeout unit	DC-5	85*	49.66
Casting conveyors and desprue operations (P17B, P18B, P19B, P20B, P21B)	BH6200, DC-7, DC-8B	15	25.16
Shotblast (P40, P41, P42)	DC-8B	9	17.87

Wheelabrator blast unit	DC-13	11	20.44
Indoor charge handling (1000A)	No control	20	30.51
Conversion Station (1150)	BH6010	25	35.43
Electric induction furnaces (1110)	BH6010	20	30.51
Electric holding furnace	No control	10	19.18
Pouring station (2000)	BH6010	20	30.51
Mold machine (2010)	BH6010	80*	49.06
Casting conveyor system (2015)	BH6020 and BH6030	80*	49.06
Cooling conveyor system (2020)	BH6020 and BH6030		
Casting shakeout system (3010)	BH6030	80*	49.06
Sand waste and sand handling (4000,4140, 5000)	BH6020 and BH6040	70*	47.77
Shotblast unit (Final blast 3090)	BH6030	10	19.18
Finish trim presses (8000)	-	5.5	12.85
Bench grinders (Cells 1,2,3,4,11,12)	Fabric filters (AAF, DC#3, DC#4, DC#1, Aercology#1)	5.5	12.85
Electric induction furnace (EU-N1)	DC-N1A	10	19.18
Sand handling system (EU-N2A)	DC-N1B	75	48.43
Return sand handling system (EU-N2B)	DC-N1B		
Pouring station (EU-N3)	DC-N2	90*	83.58
Cooling line (EU-N4)	DC-N2	90*	83.58
Casting shakeout system (EU-N5)	DC-N2	90*	83.58
Bad heat shakeout system (EU-N5A)	DC-N2	85*	80.44
Shot blast unit (EU-N6)	DC-N2	15	25.16

* Process weight includes metal and sand throughput

The pounds per hour limitations were calculated by the following:

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

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

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

OR

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

$$E = 55.0 * P^{0.11} - 40$$

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

In order to comply with this limit, the dust collectors and baghouses indicated in the above table shall operate at all times that the respective units are in use.

(b) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

(1) Pursuant to 326 IAC 8-1-6(a)(1), the core production process is exempt from 326 IAC 8-1-6 because the unlimited PTE of VOC is less 25 tons per year.

(2) The Plant 2 pouring, cooling, and shakeout units (Melting (1110), Inoculation (1150), Pouring station (2000), Casting and cooling conveyors (2015, 2020), and Casting shakeout (3010)) have potential to emit greater than 25 tons per year. However, VOC emissions from these units will be limited to less than 25 tons per year, as follows:

(i) The throughput of metal for Melting (1110), Inoculation (1150), Pouring station (2000), Casting and cooling conveyors (2015, 2020), and Casting shakeout (3010) shall be less than 61,500 tons per 12 consecutive month period with compliance determined at the end of each month.

(ii) VOC emissions from Melting (1110), Inoculation (1150), Pouring station (2000), Casting and cooling conveyors (2015, 2020), and Casting shakeout (3010) combined shall not exceed 0.8 pound per ton of metal throughput.

Compliance with these limits will render the requirements of 326 IAC 8-1-6 not applicable to these units.

(3) The Plant 1 pouring, cooling, and shakeout units (Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B) and Bad Heat Shakeout) have potential to emit greater than 25 tons per year. Therefore these units are subject to 326 IAC 8-1-6. BACT analysis for VOC for these units was performed in SSM #139-22701-00011 and SPM #139-22744-00011. BACT requirements are as follows:

(i) Material Substitution and Lower-Emitting Processes/Practices shall be used to limit VOC emissions.

(ii) VOC emissions shall not exceed 1.2 pounds per ton of metal throughput to the Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B) and Bad Heat Shakeout operations combined.

(iii) The throughput of metal to the Pouring, Cooling and Shakeout operations (P13B, P14B, and P16B) and Bad Heat Shakeout operations shall not exceed 79,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(iv) The installed Advanced Oxidation (AO) system shall be used with a minimum VOC reduction efficiency of 20%.

(4) The Plant 2, Line 4 pouring, cooling, and shakeout units (Pouring station (EU-N3), cooling line (EU-N4), and casting shakeout system (EU-N5), and bad heat shakeout system (EU-N5A)) have potential to emit greater than 25 tons per year. Therefore these units are subject to 326 IAC 8-1-6. BACT analysis for VOC for these units was performed in SSM #139-32540-00011 and SPM #139-32559-00011. BACT requirements are as follows:

The combined VOC emissions from the EU-N3, EU-N4, and EU-N5 shall not exceed 0.8 pounds per ton of iron and the VOC emissions from EU-N3 shall be controlled by a mold vent off gas ignition system.

<u>Insignificant Boilers (P40 and P41)</u>

(c) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The two (2) boilers (P40 and P41) were constructed after September 21, 1983 and have a total maximum operating capacity less than 10 million Btu per hour; therefore, pursuant to 326 IAC 6-2-4(a), the particulate emissions shall not exceed 0.6 pounds of particulate matter per million Btu.

The estimated PM emissions for the boiler are calculated as follows:
1.9 lb PM/MMCF (AP-42 Ch. 1.4 Emission Factor) * 1 MMCF/1020 MMBtu (High Heat Value) = 0.0019 lb PM/MMBtu

Therefore, the boilers are able to comply with these limits.

Insignificant degreasing

(d) 326 IAC 8-3-2 (Cold cleaner degreaser control equipment and operating requirements)
Pursuant to 326 IAC 8-3-1(c)(1)(B), insignificant cold cleaner degreaser is subject to 326 IAC 8-3-2 because it is a cold cleaner degreaser without a remote solvent reservoir constructed after January 1, 1980, but prior to July 1, 1990

Pursuant to 326 IAC 8-3-2(a), the owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

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

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

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

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

(6) Store waste solvent only in closed containers.

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

Other insignificant units

(e) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emission rate from the insignificant activities with process weight rates less than 100 pounds per hour shall not exceed 0.551 pound per hour.

Other insignificant combustion units (Natural gas-fired heaters and diesel-fired emergency generators)

(f) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The natural gas-fired heaters 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.

(g) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The natural gas-fired combustion units 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.

(h) 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 is less than twenty-five (25) tons per year and ten (10) pounds per hour.

(i) 326 IAC 9-1-1 (Carbon Monoxide Emission Limits)
The natural gas-fired combustion units are not subject to 326 IAC 9-1-1 (Carbon Monoxide Emission Limits) because there are no applicable emission limits for the source under 326 IAC 9-1-2.

(j) 326 IAC 10-1-1 (Nitrogen Oxides Control)
The natural gas-fired combustion units are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because they have potential to emit NO_x less than forty (40) tons per year.

Compliance Determination and Monitoring Requirements

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

Compliance Monitoring - Particulate			
Emission Unit	**Control Device**	**Operating Parameters**	**Frequency**
Core production dust collector	Dust collector	Visible Emission	Once per day
		Pressure Drop	Once per day
Indoor charge handling system	No control	Visible Emission	Once per day
Melting system (P8), Inoculation (P11)	Baghouse (DC-3A)	Visible Emission	Once per day
		Pressure Drop	Once per day
Melting system (P8), Inoculation (P11),Pouring (P13B)	Baghouse (DC-3B)	Visible Emission	Once per day
		Pressure Drop	Once per day
Sand Sytem (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	Baghouse (BH6400)	Visible Emission	Once per day
		Pressure Drop	Once per day
Cooling line (P14B), Shakeout unit (P16B), Casting conveyors and desprue (P17B, P18B, P19B, P20B, P21B)	Baghouse (BH6200)	Visible Emission	Once per day
		Pressure Drop	Once per day
Shotblast (P40, P41, P42), Casting conveyors and desprue (P17B, P18B, P19B, P20B, P21B)	Baghouse (DC-8B)	Pressure Drop	Once per day
Casting conveyors and desprue (P17B, P18B, P19B, P20B, P21B)	Baghouse (DC-7)	Pressure Drop	Once per day
Bad heat shakeout	Baghouse (DC-5)	Visible Emission	Once per day
		Pressure Drop	Once per day
Wheelabrator MeshBelt Blast unit	Baghouse (DC-13)	Pressure Drop	Once per day
Pouring (P13B), Cooling (P14B), Shakeout (P16B) and Bad Heat Shakeout	AO System	Ultra sonic power	Once per day
		Ozone generator plasma voltage	Once per day
		Hydrogen peroxide concentration	Once per day
Indoor charge handling system (1000A)	No control	Visible Emission	Once per day
Conversion station (1150), Induction	Baghouse	Visible Emission	Once per day

Compliance Monitoring - Particulate			
Emission Unit	**Control Device**	**Operating Parameters**	**Frequency**
furnaces (1110), Pouring station (2000), Mold machine (2010)	(BH6010)	Pressure Drop	Once per day
Casting and cooling conveyors (2015, 2020), Sand and waste sand handling (4000, 4140, 5000)	Baghouse (BH6020)	Visible Emission	Once per day
		Pressure Drop	Once per day
Casting and cooling conveyors (2015, 2020), Casting shakeout (3010), Final blast shotblast unit (3090)	Baghouse (BH6030)	Visible Emission	Once per day
		Pressure Drop	Once per day
Sand and waste sand handling (4000, 4140, 5000)	Baghouse (BH6040)	Visible Emission	Once per day
		Pressure Drop	Once per day
6 grinders (Cells 1,2,3,4,11,12)	Fabric filters (AAF, DC#3, DC#4, DC#1, and Aerocology #1)	Visible Emission	Once per day
		Pressure Drop	Once per day
Electric induction furnace (EU-N1)	Baghouse (DC-N1A)	Pressure Drop	Once per day
Sand handling system (EU-N2A), Return sand handling system (EU-N2B)	Baghouse (DC-N1B)	Visible Emission	Once per day
		Pressure Drop	Once per day
Pouring station (EU-N3), Cooling line (EU-N4), Casting shakeout system (EU-N5), Bad heat shakeout system (EU-N5A), Shot blast unit (EU-N6)	Baghouse (DC-N2)	Pressure Drop	Once per day

These monitoring requirements are necessary because the control devices must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), 40 CFR 64 (CAM), 326 IAC 8-1-6 (VOC BACT), 326 IAC 2-2 (PSD BACT) and/or avoid 326 IAC 2-2 (PSD).

(b) The testing requirements applicable to this source are as follows:

Testing Requirements			
Emission Unit(s)	**Control Device**	**Pollutant**	**Frequency of Testing**
Melting system (P8), Inoculation (P11)	Baghouse (DC-3A)	PM and PM_{10}	Once every 5 years
Melting system (P8), Inoculation (P11),Pouring (P13B)	Baghouse (DC-3B)	PM and PM_{10}	Once every 5 years
Sand System (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	Baghouse (BH6400)	PM and PM_{10}	Once every 5 years
Cooling line (P14B), Shakeout unit (P16B), Casting conveyors and desprue (P17B, P18B, P19B, P20B, P21B)	Baghouse (BH6200)	PM and PM_{10}	Once every 5 years
Shotblast (P40, P41, P42), Casting conveyors and desprue (P17B, P18B, P19B, P20B, P21B)	Baghouse (DC-8B)	PM and PM_{10}	Once every 5 years
Casting conveyors and desprue (P17B, P18B, P19B, P20B, P21B)	Baghouse (DC-7)	PM and PM_{10}	Once every 5 years
Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B)	Advanced Oxidation (AO) System	VOC	Once every 5 years

Testing Requirements			
Emission Unit(s)	**Control Device**	**Pollutant**	**Frequency of Testing**
Pouring station (P13B), Cooling line (P14B), and Shakeout operations (P16B)	No control	CO	Once every 5 years
Conversion station (1150), Induction furnaces (1110), Pouring station (2000), Mold machine (2010)	Baghouse (BH6010)	PM, PM_{10}, $PM_{2.5}$, and lead	Once every 5 years
Casting and cooling conveyors (2015, 2020), Sand and waste sand handling (4000, 4140, 5000)	Baghouse (BH6020)	PM and PM_{10}	Once every 5 years
Casting and cooling conveyors (2015, 2020), Casting shakeout (3010), Final blast shotblast unit (3090)	Baghouse (BH6030)	PM and PM_{10}	Once every 5 years
Sand and waste sand handling (4000, 4140, 5000)	Baghouse (BH6040)	PM and PM_{10}	Once every 5 years
6 grinders (Cells 1,2,3,4,11,12)	Fabric filters (AAF)	PM and PM_{10}	Once every 5 years
Melting (1110), Inoculation (1150), Pouring (2000), Casting Conveyor and Cooling Conveyor system (2015 and 2020), and Casting Shakeout system (3010)	No control	VOC	Once every 5 years
Pouring (2000), Casting Conveyor and Cooling Conveyor system (2015 and 2020), and Casting Shakeout system (3010)	No control	CO	Once every 5 years
Electric induction furnace (EU-N1)	DC-N1A	PM, PM_{10}, $PM_{2.5}$, and lead	Once every 5 years
Sand handling system (EU-N2A), Return sand handling system (EU-N2B)	DC-N1B	PM, PM_{10}, and $PM_{2.5}$,	Once every 5 years
Pouring station (EU-N3), Cooling line (EU-N4), Casting shakeout system (EU-N5), Bad heat shakeout system (EU-N5A), Shot blast unit (EU-N6)	DC-N2	PM, PM_{10}, and $PM_{2.5}$,	Once every 5 years
Pouring station (EU-N3), Cooling line (EU-N4), Casting shakeout system (EU-N5), Bad heat shakeout system (EU-N5A),	No control	VOC	Once every 5 years
Pouring station (EU-N3), Cooling line (EU-N4), Casting shakeout system (EU-N5), Bad heat shakeout system (EU-N5A)	No control	CO	Once every 5 years

These testing requirements are necessary in order for these units to demonstrate compliance with their respective emission limits.

As determined in SPM #139-21886-00011, issued on March 17, 2006, stack testing was not required for the bad heat shakeout unit in Casting Line 2.

Recommendation

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

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

An application for the purposes of this review was received on February 2, 2014.

Conclusion

The operation of this stationary gray and ductile iron foundry shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 139-34150-00011.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ryan Graunke 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) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

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

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

Appendix A: Emissions Calculations
Source Summary - Unlimited

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Line	Emission unit/process	Unit ID	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	GHGs (as CO_2e)	Total HAPs	Worst single HAP	
	Core production	Core sand bins	72.27	59.13	59.13	-	-	-	-	-	-	-	-
		Isocure macines P4, P5, P6, P7	-	-	-	0.33	32.85	23.83	-	-	-	-	-
Plant 1 - Melting and Finishing	Indoor charge handling	-	52.56	31.536	31.536	-	-	-	-	-	2.00	1.63	Manganese
	Melting system - 3 electric induction furnaces	P8	78.84	75.336	75.336	-	-	-	-	-	10.98	1.97	Manganese
	Holding system - electric holding furnace	P9				-	-	-	-	-			
	Ladle heaters	P10	0.02	0.09	0.09	0.01	1.20	0.07	1.01	1,451	0.02	0.02	Hexane
	Inoculation - metal treatment ladle	P11	175.2	175.2	175.2	-	-	0.219	-	-	6.65	5.43	Manganese
	Inoculation - metal treatment ladle		175.2	175.2	175.2	-	-	0.219	-	-	6.65	5.43	Manganese
	Grinders	Grinders 3,4,5,6,7,8,9	893.5	89.4	89.4	-	-	-	-	-	33.94	27.70	Manganese
Plant 1 - Casting Line	Sand System	P32B, P33B, P34B, P35B, P36B, P37B, P39B	1103.8	165.6	165.6	-	-	-	-	-	41.92	34.22	Manganese
	Pouring Station	P13B	275.9	135.3	65.7	1.314	0.657	9.198	394.2	657	10.81	8.55	Manganese
	Cooling line	P14B	92.0	92.0	92.0	-	-	-			8.62	2.85	Manganese
	Shakeout unit	P16B	210.2	147.2	88.0	-	-	78.84			21.12	6.52	Manganese
	Bad heat shakeout unit	-											
	Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	92.0	92.0	92.0	-	-	-	-	-	7.98	6.52	Manganese
	Shotblast	P40	394.6	39.5	39.5	-	-	-	-	-	14.99	12.23	Manganese
		P41	394.6	39.5	39.5	-	-	-	-	-	14.99	12.23	Manganese
		P42	394.6	39.5	39.5	-	-	-	-	-	14.99	12.23	Manganese
	Wheelabrator	-	819.1	81.9	81.9	-	-	-	-	-	31.11	25.39	Manganese
Plant 2 - original line (1997 line)	Indoor charge handling	1000A	52.6	31.5	31.5	-	-	-	-	-	2.00	1.63	Manganese
	Conversion Station	1150	438.0	438.0	438.0	-	-	0.5475	-	-	16.64	13.58	Manganese
	Electric induction furnace	1110	39.4	37.7	37.7	-	-	-	-	-	5.49	4.38	Lead
	Electric induction furnace		39.4	37.7	37.7	-	-	-	-	-	5.49	4.38	Lead
	Electric holding furnace	-	*	*	*	-	-	-	-	-	*	*	*
	Ladle heaters	6600, 6610	0.03	0.13	0.13	0.01	1.72	0.09	1.44	2,073	0.03	0.03	Hexane
	Pouring station	2000	367.9	180.5	87.6	1.75	0.88	12.26	525.6	876	14.41	11.41	Manganese
	Mold machine	2010	61.3	61.3	61.3	-	-	-			2.33	1.90	Manganese
	Casting conveyor system	2015	61.3	61.3	61.3	-	-	-			5.75	1.90	Manganese
	Cooling conveyor system	2020											
	Casting shakeout system	3010	140.2	98.1	58.7	-	-	52.56			14.08	4.34	Manganese
	Sand waste and sand handling	4000, 4140, 5000	1103.8	165.6	165.6	-	-	-			41.92	34.22	Manganese
	Shotblast unit	Final blast 3090	744.6	74.5	74.5	-	-	-	-	-	28.28	23.08	Manganese
	Finish trim presses	8000	409.5	41.0	41.0	-	-	-	-	-	15.55	12.70	Manganese
	Bench grinders	Cells 1,2,3,4,11,12	409.5	41.0	41.0	-	-	-	-	-	15.55	12.70	Manganese
Plant 2 - Line 4 (2013 line)	Electric induction furnace	EU-N1	39.4	37.7	37.7	-	-	-	-	-	5.49	4.38	Lead
	Sand handling system	EU-N2A	1182.6	177.4	177.4	-	-	-	-	-	44.92	36.66	Manganese
	Return sand handling system	EU-N2B											Manganese
	Pouring station	EU-N3	275.9	135.3	65.7	1.314	0.657	9.198	394.2	657	10.81	8.55	Manganese
	Cooling line	EU-N4	92.0	92.0	92.0	-	-	-			8.62	2.85	Manganese
	Casting shakeout system	EU-N5	210.2	147.2	88.0	-	-	78.84			21.12	6.52	Manganese
	Bad heat shakeout system	EU-N5A				-	-						
	Shot blast unit	EU-N6	1116.9	111.7	111.7	-	-	-	-	-	42.42	34.62	Manganese
Insignificant Activities	Natural gas combustion	-	0.05	0.18	0.18	0.01	2.42	0.13	2.03	2,921	0.05	0.04	Hexane
	Degreaser	-	-	-	-	-	-	0.38	-	-	0.004	0.004	Xylene
	Scrap bays	-	0.70	0.70	0.70	-	-	-	-	-	-	-	-
	Maintenance shop	-	0.44	0.44	0.44	-	-	-	-	-	-	-	-
	Collector penthouses	-	0.70	0.70	0.70	-	-	-	-	-	-	-	-
	Material separator	-	2.63	2.63	2.63	-	-	-	-	-	-	-	-
	Emergency Generators	-	0.71	0.71	0.71	0.66	9.97	0.81	2.15	371	0.009	0.003	Formaldehyde
		Total:	**12,014**	**3,413**	**3,023**	**5.40**	**50.35**	**267.2**	**1,321**	**9,007**	**527.7**	**372.5**	**Manganese**

* Potential emissions for the holding furnaces are included in the estimate for holding furnaces emissions

Appendix A: Emissions Calculations
Source Summary - Limited

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Emission unit/process	Unit ID	PM	PM_{10}	$PM_{2.5}$*	SO_2	NO_x	VOC	CO	GHGs (as CO_2e)
* $PM_{2.5}$ was not limited prior to the 2013 modification, limited $PM_{2.5}$ is assumed equal to PM_{10} for the purposes of limited PTE									
Original Equipment									
Core production	Core sand bins	3.59	3.59	3.59	-	-	-	-	-
	Isocure boxes (P4, P5, P6, P7)	-	-	-	0.33	32.85	23.83	-	-
Indoor charge handling	-	9.48	9.48	9.48	-	-	-	-	-
Melting system - 3 electric induction furnaces	P8	7.90	7.90	7.90	-	-	-	-	-
Holding system - electric holding furnace	P9	3.95	3.95	3.95	-	-	-	-	-
Grinders**	Grinders 3,4	***	**	**	-	-	-	-	-
	Subtotal for orignal units:	**24.9**	**24.9**	**24.9**	**0.3**	**32.9**	**23.8**	**-**	**-**
**This limit was later separated into limits for the individual grinnders (below). Grinder 5 (constructed in 2009) was also included in this limit.									
1997 Modification									
Indoor charge handling	1000A	0.5	0.5	0.5	-	-	-	-	-
Conversion Station	1150	15.4	15.4	15.4	-	-	24.6	98.4	876
Electric induction furnace	1110				-	-			
Electric induction furnace					-	-			
Electric holding furnace	-	3.1	3.1	3.1	-	-			
Pouring station	2000	***	***	***	1.75	0.88			
Mold machine	2010	***	***	***	-	-			
Casting conveyor system	2015	44.6	44.6	44.6	-	-			
Cooling conveyor system	2020								
Casting shakeout system	3010				-	-			
Shotblast unit	Final blast 3090				-	-	-	-	-
Sand waste and sand handling	4000, 4140, 5000	23.7	23.7	23.7	-	-	-	-	-
		10.8	10.8	10.8					
Finish trim presses	8000	1.45	1.45	1.45	-	-	-	-	
Bench grinders	Cells 1,2,3,4,11,12				-	-	-	-	-
Ladle heaters	6600, 6610	0.03	0.13	0.13	0.01	1.72	0.09	1.44	2,073
	Subtotal for modification:	**99.5**	**99.6**	**99.6**	**1.8**	**2.6**	**24.7**	**99.8**	**2949.4**
***Since some limits are for common control devices rather than emissions units, these unit's limits are combined with other units.									
2001 Modification									
Wheelabrator	-	**25.0**	**14.9**	**14.9**	**-**	**-**	**-**	**-**	**-**
2004 Modification									
Ladle heaters	P10	0.02	0.09	0.09	0.01	1.20	0.07	1.01	1,451
Inoculation - metal treatment ladle	P11	6.72	7.46	7.46	-	-	0.22	-	-
Inoculation - metal treatment ladle			7.46	7.46	-	-	0.22	-	-
Sand System	P32B, P33B, P34B, P35B, P36B, P37B, P39B	2.9	5.0	5.0	-	-	-	-	-
Pouring Station	P13B	***	***	***	1.31	0.66	47.4	98.75	657
Cooling line	P14B	7.5	12.5	12.5	-	-			
Shakeout unit	P16B				-	-			
Bad heat shakeout unit	-								
Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	1.5	2.4	2.4	-	-	-	-	-
Shotblast	P40	4.3	4.5	4.5	-	-	-	-	-
	P41				-	-	-	-	-
	P42				-	-	-	-	-
	Subtotal for modification:	**23.0**	**39.4**	**39.4**	**1.3**	**1.9**	**47.9**	**99.8**	**2,108**
***Because some limits are for common control devices rather than emissions units, these unit's limits are combined with other units.									
2009 Modification									
Grinders	Grinders 3,4,5	2.3	2.3	2.3	-	-	-	-	-
	Grinder 6	1.2	1.2	1.2	-	-	-	-	-
	Grinder 7	1.2	1.2	1.2	-	-	-	-	-
	Grinder 8	2.3	2.3	2.3	-	-	-	-	-
	Grinder 9	0.8	0.8	0.8	-	-	-	-	-
	Subtotal for modification:	**7.9**	**7.9**	**7.9**	**-**	**-**	**-**	**-**	**-**
2013 Modification									
Electric induction furnace	EU-N1	25.0	15.0	10.0	-	-	40.0	100.0	-
Sand handling system	EU-N2A				-	-			-
Return sand handling system	EU-N2B								
Pouring station	EU-N3				1.314	0.657			657
Cooling line	EU-N4				-	-			
Casting shakeout system	EU-N5				-	-			
Bad heat shakeout system	EU-N5A								
Shot blast unit	EU-N6				-	-			-
Core production	Core sand bins, P4, P5, P6, P7				-	-			-
Indoor charge handling	1000A				-	-			-
Conversion station	1150				-	-			-
Induction furnaces	1110				-	-			-
Bench grinders	Cells 1, 2, 3, 4, 11, 12				-	-			-
	Subtotal for modification:	**25.0**	**15.0**	**10.0**	**1.3**	**0.7**	**40.0**	**100.0**	**657**
Insignificant Units									
Natural gas combustion	-	0.05	0.18	0.18	0.01	2.42	0.13	2.03	2,921
Degreaser	-	-	-	-	-	-	0.38	-	-
Scrap bays	-	0.70	0.70	0.70	-	-	-	-	-
Maintainence shop	-	0.44	0.44	0.44	-	-	-	-	-
Collector penthouses	-	0.70	0.70	0.70	-	-	-	-	-
Material separator	-	2.63	2.63	2.63	-	-	-	-	-
Emergency Generators	-	0.71	0.71	0.71	0.66	9.97	0.81	2.15	371
	Subtotal for insignificants:	**5.2**	**5.4**	**5.4**	**0.7**	**12.4**	**1.3**	**4.2**	**3,292**

Appendix A: Emissions Calculations
PSD Limits

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Original equipment - Plant 1, constructed in 1988 and 1994 for P7

			PM/PM$_{10}$		
Emission unit/process	Unit ID	Limited Throughput (ton metal/yr)	Emission limit (lb/hr)	Emission limit (lb/ton metal or sand)	PTE (ton/yr)
Core production	Core sand bins	N/A	0.82	-	3.59
Charge Handling*	-	79000	-	0.24	9.48
Melting system**	P8	79000	-	0.2	7.90
Holding system**	P9	79000	-	0.1	3.95
Grinders***	***	***	***	***	***

Notes:
These units were constructed in 1988 and have not been modified since.
These limits were taken in order to limit PM and PM $_{10}$ less than 100 tons/yr for the source to be Minor for PSD.
* This limit was changed from 0.24 lb/hr to 0.24 lb/ton of metal in SPM #139-27169-00011, issued on June 5, 2009.
** The limited throughput was lowered from 90,000 tons in SPM #139-22744-00011, issued on December 20, 2007. A separate limit for the holding system was also added.
*** The original limit for the grinders was modified in SPM #139-27169-00011 when new insignificant grinding units were constructed. The limit also includes Grinder 5.

1997 Modification (CP #139-8845-00011) - Plant 2 Construction

		PM/PM$_{10}$ Limit				VOC		CO	
Control Device	Emission Unit (ID)	Emission limit (lb/hr)	Emission limit (lb/ton metal or sand)	PTE (ton/yr)	Emission Unit (ID)	Emission limit (lb/ton metal)	PTE (ton/yr)	Emission limit (lb/ton metal)	PTE (ton/yr)
N/A	Indoor charge handling (1000A)	0.12	-	0.53	Melting (1110)*, Conversion station (1150)*, Pouring station (2000), Casting and cooling conveyors (2015, 2020), Casting shakeout (3010)	0.8	24.6	3.2	98.4
BH6010	Conversion station (1150), Induction furnaces (1110), Pouring station (2000), Mold machine (2010)	-	0.50	15.38					
N/A	Electric holding furnace	-	0.10	3.08	*Melting (1110) and Conversion station are limited for VOC and not CO				
BH6020*	Casting and cooling conveyors (2015, 2020), Sand and waste sand handling (4000, 4140, 5000)	-	0.11	23.68					
BH6030	Casting and cooling conveyors (2015, 2020)**, Casting shakeout (3010)**, Final blast shotblast unit (3090)	-	1.45	44.59	Limited throughput (tons metal/yr)	61,500			
BH6040*	Sand and waste sand handling (4000, 4140, 5000)	-	0.05	10.76	Limited throughput (tons sand/yr)	430,500			
Fabric filters (AAF, DC#3, DC#4, DC#1, and Aerocology #1)	Finish trim presses (8000), 6 grinders (Cells 1,2,3,4,11,12)	-	0.06	1.45	Limited throughput (tons metal in finish & grinding/yr)	48,180			

Notes:
These units were constructed in 1997 and have not been modified since.
These limits limited PM, PM $_{10}$ and CO to less than 100 tons/yr in order for the modification to be Minor for PSD.
VOC was limited to less than 25 tons per year to avoid 326 IAC 8-1-6 and for the modification to be Minor for PSD.
After this modification, the source became PSD major.
These limits were adjusted in SPM #139-22744-00011, issued on December 20, 2007.
*The throughput of sand was used to calculate the limited PTE of these baghouses.
**Conveyors were modified and Shakeout was replaced in SSM #139-28190-00011, issued on September 1, 2009. This modification did not result in net increase in emissions. Therefore, the units did not require new emission limits and were kept under the existing 1997 PSD Minor emission limits.

2001 Modification (SSM #139-22701-000011) - Wheelabrator MeshBelt Blast unit constructed (permitted in 2007)

	PM		PM$_{10}$	
Unit	Emission limit (lb/ton metal or sand)	PTE (ton/yr)	Emission limit (lb/ton metal or sand)	PTE (ton/yr)
Wheelabrator	5.7	24.97	3.4	14.89

Notes:
This unit was constructed in 2001 and permitted under SSM #139-22701-00011 issued on December 4, 2007.
These limits limit PM and PM $_{10}$ to less than 25 and 15 tons/yr, respectively, in order for the modification to be Minor for PSD.

Methodology:
PTE (ton/yr) = Emission Limit (lb/hr) * 8760 hrs/yr * 1 ton/2000 lbs **OR** = Emission Limit (lb/ton) * Limited Throughput (tons of metal or sand/yr) * 1 ton/2000 lbs

Appendix A: Emissions Calculations
PSD Limits (continued)

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

2004 Modification (SSM #139-17898-00011) - Plant 1 Casting Line construction, Inoculation system (P11) replacement

				PM - PSD Minor		PM$_{10}$ - BACT						VOC - BACT		CO - PSD Minor	
Control Device	Emission unit/process	Limited throughput (tons metal or sand/yr)	Air flow (cfm)	Emission limit (lb/ton metal or sand)	PTE (ton/yr)	Emission limit (lb/ton metal or sand)	PTE (ton/yr)	Emission limit gr/dcsf (filterable)	PTE (lb/hr)	PTE (ton/yr)	Emission Unit (ID)	Emission limit (lb/ton metal)	PTE (ton/yr)	Emission limit (lb/ton metal)	PTE (ton/yr)
DC-3A	Melting system (P8)*, Inoculation (P11)	79000	66225	0.17	6.72	0.633	25.00	0.003	1.70	7.46	Pouring (P13B), Cooling line (P14B), Shakeout unit (P16B), Bad heat shakeout	1.2	47.4	2.5	98.75
DC-3B	Melting system (P8)*, Inoculation (P11), Pouring (P13B)	79000	66225					0.003	1.70	7.46					
BH6400	Sand Sytem (P32B, P33B, P34B, P35B, P36B, P37B, P39B)	368667	44000	0.016	2.95	0.02	3.69	0.003	1.13	4.96					
BH6200	Cooling line (P14B), Shakeout unit (P16B), Casting conveyors and desprue (P17B - P22B)	79000	111000	0.19	7.51	1.045	41.28	0.003	2.85	12.50					
DC-8B	Shotblast (P40, P41, P42), Casting conveyors and desprue (P17B-P22B)	79000	40000	0.11	4.35	0.085	3.36	0.003	1.03	4.51					
DC-7	Casting conveyors and desprue (P17B-P22B)	79000	21300	0.037	1.46	0.085	3.36	0.003	0.55	2.40					
DC-5	Bad heat shakeout**	79000	17400	0.03	1.19	0.03	1.19	0.003	0.45	1.96					

Notes:
These units were contructed or modified in 2004 and have not been modified since.
These limits limit PM and CO to less than 25 and 100 tons/yr, respectively, in order for the modification to be Minor for PSD.
BACT determination for PM_{10} was made in SPM #139-17898-00011.
BACT determination for VOC was made in SPM #139-22744-00011 following a failed stack test in which the source could not meet the PSD Minor limit for VOC.
These limits were adjusted in SPM #139-22744-00011, issued on December 20, 2007.
*The melting system (P8) was not modified in 2004; however, this limit is on the baghouse that is common control with the units constructed in 2004..
**Metal will pass through either the shakeout or bad shakeout for purposes of calculating PTE

2009 (SPM #139-27169-00011) - Grinders 5-9 were constructed, Grinders 3 and 4 were existing)

	PM/PM$_{10}$	
Units	Emission limit (lb/hr)	PTE (ton/yr)
Grinders 3,4,5	0.53	2.32
Grinder 6	0.28	1.23
Grinder 7	0.28	1.23
Grinder 8	0.53	2.32
Grinder 9	0.18	0.79

Notes:
These limits limit PM and PM $_{10}$ to less than 25 and 15 tons/yr, respectively, in order for the modification to be Minor for PSD.
* Grinders 3 and 4 were not constructed in 2009; however, this limit is on the baghouse that is common control for new and old units.

2013 (SPM#32540) - Plant 2, Line 4 was constructed, throughputs to existing units was modified
New line + modified units included as one limit.

		PSD Minor Limits (ton/yr)					
Emission unit/process	Unit ID	PM	PM$_{10}$	PM$_{2.5}$	Lead	CO	VOC
New units							
Electric induction furnace	EU-N1						
Sand handling system	EU-N2A						
Return sand handling system	EU-N2B						
Pouring station	EU-N3						
Cooling line	EU-N4						
Casting shakeout system	EU-N5	25	15	10	0.6	100	40
Bad heat shakeout system	EU-N5A						
Shot blast unit	EU-N6						
Modified units							
Core production	Core sand bins, P4, P5, P6, P7						
Indoor charge handling	1000A						
Conversion station	1150						
Induction furnaces	1110						
Bench grinders	Cells 1, 2, 3, 4, 11, 12						

Notes:
These limits limit PM, PM $_{10}$, PM$_{2.5}$, Lead, CO, and VOC below the PSD significance threshold, in order for the modification to be Minor for PSD.
These limits include the potential emissions from all new units, the additional throughput of used in Line 4 for the existing units, and the entire throughput of the Pouring Station (2000).
The throughput of Pouring Station (2000) increased in this modification but is not used as part of Plant 2, Line 4.

Methodology:
PTE (ton/yr) = Emisson Limit (lb/hr) * 8760 hrs/yr * 1 ton/2000 lbs **OR** = Emission Limit (lb/ton) * Limited Throughput (tons of metal or sand/yr) * 1 ton/2000 lbs
PM_{10} BACT Limit (lb/hr) = BACT limit (gr/dcsf, filterable) * Air flow (cfm) * 60 min/hr * 1 lb/7000 gr

Appendix A: Emissions Calculations
Coremaking - Three (3) core sand bins and Four (4) isocure cold box core machines (P4, P5, P6, P7)

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Unit	Unit ID	Max throughput (ton sand/hr)	Max resin usage (lb/ton sand)	Max catalyst usage (lb/ton sand)	VOC emission factor from resin (lb VOC/ton sand)	PTE of VOC from resin (ton/yr)	PTE of VOC from catalyst (ton/yr)	Total PTE of VOC (ton/yr)
Isocure cold box core machines	P4	0.5	8.00	1.12	1.6	3.50	2.45	5.96
	P5	0.5	8.00	1.12	1.6	3.50	2.45	5.96
	P6	0.5	8.00	1.12	1.6	3.50	2.45	5.96
	P7	0.5	8.00	1.12	1.6	3.50	2.45	5.96

				Emission Factors (lb/ton of sand or metal)				
SCC	Max throughput (ton sand/hr)	Max throughput (ton metal/hr)	Unit	PM	PM_{10}	$PM_{2.5}$	SO_2*	NO_x
3-04-003-19, 3-04-003-51, 3-04-003-53	2	15	Core sand bins	1.1	0.9	0.9	-	-
			Isocure machines (P4, P5, P6, P7)	-	-	-	0.038	0.5

	PTE (tons/yr)					
Unit	PM	PM_{10}	$PM_{2.5}$	SO_2*	NO_x	VOC
Core sand bins	72.27	59.13	59.13	-	-	-
Isocure machines (P4, P5, P6, P7)	-	-	-	0.33	32.85	23.83

Notes:
Particualte emissions are generated from the core sand bins, exhausting to stack 9 and controlled by a dust collector.
SO_2, NO_x, and VOC emissions are generated from te cold box core, exhausting to stacks 10 A and 10B and uncontrolled.
Catalyst is DMIPA (dimethylisopropylamine), a non-HAP, VOC. It is assumed all the catalyst evaporates as VOC.
VOC emission factor for resin is from SPM #139-22744-00011, issued on December 20, 2007.
All other emission factors are from AP-42, Section 12.10 and WebFIRE using the SCC specified above.
*SO_2 emission factor is based on the tons of sand throughput. All other emission factors are based on tons of metal

Methodology:
PTE of VOC from resin (ton/yr) = Max throughput (ton sand/hr) * VOC emission factor (lb VOC/ton sand) * 8670 hrs/yr * 1 ton/2000 lbs
PTE of VOC from catalyst (ton/yr) = Max throughput (ton sand/hr) * Max catalyst usage (lb/ton sand) * 8670 hrs/yr * 1 ton/2000 lbs
PTE of other pollutants (ton/yr) = Max throughput (ton sand or metal/hr) * Emission factor (lb/ton sand or metal) * 8670 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Plant 1 - Unlimited PTE of criteria pollutants

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

					Emission Factors (lb/ton metal (or sand))							
Line	Emission unit/process	Unit ID	SCC	Capacity (tons metal (or sand)/hr)	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO^1	GHGs as CO_2e^2
Plant 1, Melting and Finishing	Indoor charge handling	-	3-04-003-15	20	0.6	0.36	0.36	-	-	-	-	-
	Melting system - 3 electric induction furnaces	P8	3-04-003-03	20	0.9	0.86	0.86	-	-	-	-	-
	Holding system - electric holding furnaces	P9	3-04-003-03	20	*	*	*	-	-	-	-	-
	Inoculation - metal treatment ladle	P11	3-04-003-10	10	4.0	4.0	4.0	-	-	0.005	-	-
	Inoculation - metal treatment ladle		3-04-003-10	10	4.0	4.0	4.0	-	-	0.005	-	-
	Grinders	Grinders 3,4,5,6,7,8,9	3-04-003-40	12	17	1.7	1.7	-	-	-	-	-
Plant 1, Casting Line	Sand System	P32B, P33B, P34B, P35B, P36B, P37B, P39B	3-04-003-50	70	3.6	0.54	0.54	-	-	-	-	-
	Pouring Station	P13B	3-04-003-18, 3-04-003-20	15	4.2	2.06	1.00	0.02	0.01	0.14	6	10
	Cooling line	P14B	3-04-003-25	15	1.4	1.4	1.4	-	-	-		
	Shakeout unit	P16B	3-04-003-31	15	3.2	2.24	1.34	-	-	1.2		
	Bad heat shakeout unit	-	3-04-003-31	15	3.2	2.24	1.34	-	-	1.2		
	Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	3-04-003-25	15	1.4	1.4	1.4	-	-	-	-	-
	Shotblast	P40	3-04-003-40	5.3	17	1.7	1.7	-	-	-	-	-
		P41	3-04-003-40	5.3	17	1.7	1.7	-	-	-	-	-
		P42	3-04-003-40	5.3	17	1.7	1.7	-	-	-	-	-
Wheelabrator			3-04-003-40	11	17	1.7	1.7	-	-	-	-	-

Notes:
Unless noted, all emission factors are from AP-42, Section 12.10 and WebFIRE using the SCC specified above.
[1] CO is from IDEM letter "Notice of Limited Self-Disclosure Opportunity for CO Emissions from PCS Operations within the Foundry Sector", August 11, 2006
[2] GHGs as CO_2e emissions is equal to CO_2 emissions. CO_2 emission factor from American Foundry Society (AFS) Data, "Pouring, Cooling, and Shakeout CO/CO2 Emission Sources and Variability" (AFS 08-031), for greensand casting operations.
* Potential emissions for the holding furnaces are included in the estimate for holding furnaces emissions.
PM = PM_{10} = $PM_{2.5}$, when specific emissions are not provided

			PTE (tons/year)							
Line	Emission unit/process	Unit ID	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	GHGs as CO_2e^2
Melting and Finishing	Indoor charge handling	-	52.6	31.5	31.5	-	-	-	-	-
	Melting system - 3 electric induction furnaces	P8	78.8	75.3	75.3	-	-	-	-	-
	Holding system - electric holding furnaces	P9				-	-	-	-	-
	Inoculation - metal treatment ladle	P11	175.2	175.2	175.2	-	-	0.219	-	-
	Inoculation - metal treatment ladle		175.2	175.2	175.2	-	-	0.219	-	-
	Grinders	Grinders 3,4,5,6,7,8,9	893.5	89.4	89.4	-	-	-	-	-
Casting Line	Sand System	P32B, P33B, P34B, P35B, P36B, P37B, P39B	1103.8	165.6	165.6	-	-	-	-	-
	Pouring Station	P13B	275.9	135.3	65.7	1.314	0.657	9.198	394.2	657
	Cooling line	P14B	92.0	92.0	92.0	-	-	-		
	Shakeout unit[3]	P16B	210.2	147.2	88.0	-	-	78.84		
	Bad heat shakeout unit[3]	-				-	-			
	Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	92.0	92.0	92.0	-	-	-	-	-
	Shotblast	P40	394.6	39.5	39.5	-	-	-	-	-
		P41	394.6	39.5	39.5	-	-	-	-	-
		P42	394.6	39.5	39.5	-	-	-	-	-
Wheelabrator			819.1	81.9	81.9	-	-	-	-	-
		Totals:	**5,152**	**1,379**	**1,250**	**1.3**	**0.7**	**88**	**394**	**657**

Notes:
[3] The 15 lb/yr max throughput of poured metal will pass through only one of the shakeout units (normal or bad heat), therefore potential emissions are included for only one of the units.

Methodology:
PTE (tons/yr) = Capacity (tons metal (or sand)/hr) * Emission factor (lb/ton metal (or sand)) * 8760 hr/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Plant 1 - Unlimited PTE of HAPs

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

				Emission Factors (lb/ton metal (or sand))										
Line	Emission unit/process	Unit ID	Capacity (tons metal (or sand)/hr)	PM	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Lead	Manganese	Nickel	Selenium	Organic HAPs[2]
Melting and Finishing	Indoor charge handling	-	20	0.6	1.11E-03	7.80E-05	3.60E-05	2.28E-04	1.80E-05	2.31E-03	1.86E-02	4.02E-04	6.00E-06	-
	Melting system - 3 electric induction furnaces[1]	P8	20	0.9	1.67E-03	1.17E-04	5.40E-05	3.42E-04	2.70E-05	1.00E-01	2.25E-02	6.03E-04	9.00E-06	-
	Holding system - electric holding furnaces	P9	20	*	*	*	*	*	*	*	*	*	*	-
	Inoculation - metal treatment ladle	P11	10	4.0	7.40E-03	5.20E-04	2.40E-04	1.52E-03	1.20E-04	1.54E-02	1.24E-01	2.68E-03	4.00E-05	-
	Inoculation - metal treatment ladle		10	4.0	7.40E-03	5.20E-04	2.40E-04	1.52E-03	1.20E-04	1.54E-02	1.24E-01	2.68E-03	4.00E-05	-
	Grinders	Grinders 3,4,5,6,7,8,9	12	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
Casting Line	Sand Sytem	P32B, P33B, P34B, P35B, P36B, P37B, P39B	70	3.6	6.66E-03	4.68E-04	2.16E-04	1.37E-03	1.08E-04	1.39E-02	1.12E-01	2.41E-03	3.60E-05	-
	Pouring Station	P13B	15	4.2	7.77E-03	5.46E-04	2.52E-04	1.60E-03	1.26E-04	1.62E-02	1.30E-01	2.81E-03	4.20E-05	5.00E-03
	Cooling line	P14B	15	1.4	2.59E-03	1.82E-04	8.40E-05	5.32E-04	4.20E-05	5.39E-03	4.34E-02	9.38E-04	1.40E-05	7.80E-02
	Shakeout unit	P16B	15	3.2	5.92E-03	4.16E-04	1.92E-04	1.22E-03	9.60E-05	1.23E-02	9.92E-02	2.14E-03	3.20E-05	2.00E-01
	Bad heat shakeout unit	-	15	3.2	5.92E-03	4.16E-04	1.92E-04	1.22E-03	9.60E-05	1.23E-02	9.92E-02	2.14E-03	3.20E-05	-
	Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	15	3.2	5.92E-03	4.16E-04	1.92E-04	1.22E-03	9.60E-05	1.23E-02	9.92E-02	2.14E-03	3.20E-05	-
	Shotblast	P40	5.3	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
		P41	5.3	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
		P42	5.3	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
Wheelabrator			11	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
			Weight % of PM:		0.185%	0.013%	0.006%	0.038%	0.003%	0.385%	3.100%	0.067%	0.001%	

Notes:
Metal HAP emission factors are based on the average metal HAP content for gray iron foundries, from EPA's SPECIATE database.
[1] Lead and manganese emission factors for electric induction furnaces were provided in AP-42, Section
[2] Organic HAPs emission factors are from the Background Information Document for the NESHAP for Iron and Steel Foundries, Table 5-4 (CERP, 1998).
* Potential emissions for the holding furnaces are included in the estimate for holding furnaces emissions

			PTE (tons/year)										
Line	Emission unit/process	Unit ID	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Lead	Manganese	Nickel	Selenium	Total Metal HAPs	Organic HAPs
Melting and Finishing	Indoor charge handling	-	0.10	0.01	0.003	0.02	0.002	0.20	1.63	0.04	0.001	2.00	-
	Melting system - 3 electric induction furnaces	P8	0.15	0.01	0.005	0.03	0.002	8.76	1.97	0.05	0.001	10.98	-
	Holding system - electric holding furnace	P9										0.00	-
	Inoculation - metal treatment ladle	P11	0.32	0.02	0.011	0.07	0.005	0.67	5.43	0.12	0.002	6.65	-
	Inoculation - metal treatment ladle		0.32	0.02	0.011	0.07	0.005	0.67	5.43	0.12	0.002	6.65	-
	Grinders	Grinders 3,4,5,6,7,8,9	1.65	0.12	0.054	0.34	0.027	3.44	27.70	0.60	0.009	33.94	-
Casting Line	Sand System	P32B, P33B, P34B, P35B, P36B, P37B, P39B	2.04	0.14	0.066	0.42	0.033	4.25	34.22	0.74	0.011	41.92	-
	Pouring Station	P13B	0.51	0.04	0.017	0.10	0.008	1.06	8.55	0.18	0.003	10.48	0.329
	Cooling line	P14B	0.17	0.01	0.006	0.03	0.003	0.35	2.85	0.06	0.001	3.49	5.125
	Shakeout unit[3]	P16B	0.39	0.03	0.013	0.08	0.006	0.81	6.52	0.14	0.002	7.98	13.140
	Bad heat shakeout unit[3]	-											
	Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	0.39	0.03	0.013	0.08	0.006	0.81	6.52	0.14	0.002	7.98	-
	Shotblast	P40	0.73	0.05	0.024	0.15	0.012	1.52	12.23	0.26	0.004	14.99	-
		P41	0.73	0.05	0.024	0.15	0.012	1.52	12.23	0.26	0.004	14.99	-
		P42	0.73	0.05	0.024	0.15	0.012	1.52	12.23	0.26	0.004	14.99	-
-	Wheelabrator	-	1.52	0.11	0.049	0.31	0.025	3.15	25.39	0.55	0.008	31.11	-
		Total:	**9.75**	**0.69**	**0.32**	**2.00**	**0.16**	**28.75**	**162.91**	**3.53**	**0.05**	**208.16**	**18.59**

Notes:
[3] The 15 lb/yr throughput of poured metal will pass through only one of the shakeout units (normal or bad heat), therefore potential emissions are included for only one of the units.

Methodology:
PTE (tons/yr) = Capacity (tons metal (or sand)/hr) * Emission factor (lb/ton metal (or sand)) * 8760 hr/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Plant 1 Ladle heaters

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Emission unit	Emission Unit ID	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)
Metal treatment ladle heater	P10	1	8.6
Metal treatment ladle heater		1	8.6
Pouring ladle heater		0.4	3.4
Pouring ladle heater		0.4	3.4
	Totals:	**2.800**	**24.0**

	Pollutant						
	PM*	PM_{10}*	Direct $PM_{2.5}$*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission (tons/yr)	0.02	0.1	0.09	0.01	1.2	0.1	1.0

*PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission (tons/yr)	2.525E-05	1.443E-05	9.018E-04	2.164E-02	4.088E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission (tons/yr)	6.012E-06	1.323E-05	1.683E-05	4.569E-06	2.525E-05
				Total HAPs:	**2.269E-02**

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emission (tons/yr)	1,443	0.0	0.0
Summed Potential Emissions (tons/yr)	1,443		
CO_2e Total (tons/yr)	1,451		

Notes:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Total Heat Input Capacity (MMBtu/hr) = ∑ (Heat Input Capacity Each (MMBtu/hr/unit) * Number of Units)
Total Potential Throughput (MMCF/yr) = Heat Input Capacity Each (MMBtu/hr) * Number of Units * 8,760 hrs/yr * High Heat Value (1 MMCF/1,020 MMBtu)
Potential Emission (tons/yr) = Total Potential Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs
CO_2e (tons/yr) = CO_2 Potential Emission (tons/yr) * CO_2 GWP (1) + CH_4 Potential Emission (tons/yr) * CH_4 GWP (25) + N_2O Potential Emission (tons/yr) * N_2O GWP (298).

Appendix A: Emissions Calculations
Plant 2 - Unlimited PTE of criteria pollutants

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

					Emission Factors (lb/ton metal (or sand))							
Line	Emission unit/process	Unit ID	SCC	Capacity (tons metal (or sand)/hr)	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO^1	GHGs as CO_2e^2
Plant 2, original line (1997 line)	Indoor charge handling	1000A	3-04-003-15	20	0.6	0.36	0.36				-	-
	Conversion Station	1150	3-04-003-10	25	4.0	4.0	4.0	-	-	0.005	-	-
	Electric induction oven	1110	3-04-003-03	10	0.9	0.86	0.86	-	-	-	-	-
	Electric induction oven		3-04-003-03	10	0.9	0.86	0.86	-	-	-	-	-
	Electric holding oven	-	3-04-003-04	-	*	*	*	-	-	-	-	-
	Pouring station	2000	3-04-003-18, 3-04-003-20	20	4.2	2.06	1.00	0.02	0.01	0.14	6	10
	Mold machine	2010	3-04-003-25	10	1.4	1.4	1.4	-	-	-		
	Casting conveyor system	2015	3-04-003-25	10	1.4	1.4	1.4	-	-	-		
	Cooling conveyor system	2020										
	Casting shakeout system	3010	3-04-003-31	10	3.2	2.24	1.34	-	-	1.2		
	Sand waste and sand handling	4000, 4140, 5000	3-04-003-50	70	3.6	0.54	0.54	-	-	-	-	-
	Shotblast unit	Final blast 3090	3-04-003-40	10	17	1.7	1.7	-	-	-	-	-
	Finish trim presses	8000	3-04-003-40	5.5	17	1.7	1.7	-	-	-	-	-
	Bench grinders	Cells 1,2,3,4,11,12	3-04-003-40	5.5	17	1.7	1.7	-	-	-	-	-
Plant 2, Line 4 (2013 line)	Electric induction furnace	EU-N1	3-04-003-03	10	0.9	0.86	0.86	-	-	-	-	-
	Sand handling system	EU-N2A	3-04-003-50	75	3.6	0.54	0.54	-	-	-	-	-
	Return sand handling system	EU-N2B	3-04-003-50					-	-	-	-	-
	Pouring station	EU-N3	3-04-003-18, 3-04-003-20	15	4.2	2.06	1.00	0.02	0.01	0.14	6	10
	Cooling line	EU-N4	3-04-003-25	15	1.4	1.4	1.4	-	-	-		
	Casting shakeout system	EU-N5	3-04-003-31	15	3.2	2.24	1.34	-	-	1.2		
	Bad heat shakeout system	EU-N5A	3-04-003-31	10	3.2	2.24	1.34	-	-	1.2		
	Shot blast unit	EU-N6	3-04-003-39	15	17	1.7	1.7	-	-	-	-	-

Notes:
Unless noted, all emission factors are from AP-42, Section 12.10 and WebFIRE using the SCC specified above.
[1] CO is from IDEM letter "Notice of Limited Self-Disclosure Opportunity for CO Emissions from PCS Operations within the Foundry Sector", August 11, 2006
[2] GHGs as CO_2e emissions is equal to CO_2 emissions. CO_2 emission factor from American Foundry Society (AFS) Data, "Pouring, Cooling, and Shakeout CO/CO2 Emission Sources and Variability" (AFS 08-031), for greensand casting operations.
* Potential emissions for the holding furnaces are included in the estimate for holding furnaces emissions.
PM = PM_{10} = $PM_{2.5}$, when specific emissions are not provided

			PTE (tons/year)							
Line	Emission unit/process	Unit ID	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	GHGs as CO_2e^2
Plant 2, original line (1997 line)	Indoor charge handling	1000A	52.6	31.5	31.5	-	-	-	-	-
	Conversion Station	1150	438.0	438.0	438.0	-	-	0.5	-	-
	Electric induction oven	1110	39.4	37.7	37.7	-	-	-	-	-
	Electric induction oven		39.4	37.7	37.7	-	-	-	-	-
	Electric holding oven	-	*	*	*	-	-	-	-	-
	Pouring station	2000	367.9	180.5	87.6	1.8	0.9	12.3	526	876
	Mold machine	2010	61.3	61.3	61.3	-	-	-		
	Casting conveyor system	2015	61.3	61.3	61.3	-	-	-		
	Cooling conveyor system	2020								
	Casting shakeout system	3010	140.2	98.1	58.7	-	-	52.6		
	Sand waste and sand handling	4000, 4140, 5000	1103.8	165.6	165.6	-	-	-		
	Shotblast unit	Final blast 3090	744.6	74.5	74.5	-	-	-	-	-
	Finish trim presses	8000	409.5	41.0	41.0	-	-	-	-	-
	Bench grinders	Cells 1,2,3,4,11,12	409.5	41.0	41.0	-	-	-	-	-
Plant 2, Line 4 (2013 line)	Electric induction furnace	EU-N1	39.4	37.7	37.7	-	-	-	-	-
	Sand handling system	EU-N2A	1182.6	177.4	177.4	-	-	-	-	-
	Return sand handling system	EU-N2B	0.0	0.0	0.0	-	-	-	-	-
	Pouring station	EU-N3	275.9	135.3	65.7	1.3	0.7	9.2	394	657
	Cooling line	EU-N4	92.0	92.0	92.0	-	-	-		
	Casting shakeout system[3]	EU-N5	210.2	147.2	88.0	-	-	78.8		
	Bad heat shakeout system[3]	EU-N5A				-	-			
	Shot blast unit	EU-N6	1116.9	111.7	111.7	-	-	-	-	-
	Totals:		**6,785**	**1,969**	**1,708**	**3**	**2**	**153**	**920**	**1,533**

Notes:
[3] The 15 lb/yr throughput of metal will pass through only one of the shakeout units (normal or bad heat), therefore only one of the units is accounted for PTE.

Methodology:
PTE (tons/yr) = Capacity (tons metal (or sand)/hr) * Emission factor (lb/ton metal (or sand)) * 8760 hr/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Plant 2 - Unlimited PTE of HAPs

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

				Emission Factors (lb/ton metal (or sand))										
Line	Emission unit/process	Unit ID	Capacity (tons metal (or sand)/hr)	PM	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Lead	Manganese	Nickel	Selenium	Organic HAPs[2]
Plant 2, original line (1997 line)	Indoor charge handling	1000A	20	0.6	1.11E-03	7.80E-05	3.60E-05	2.28E-04	1.80E-05	2.31E-03	1.86E-02	4.02E-04	6.00E-06	-
	Conversion Station	1150	25	4.0	7.40E-03	5.20E-04	2.40E-04	1.52E-03	1.20E-04	1.54E-02	1.24E-01	2.68E-03	4.00E-05	-
	Electric induction oven[1]	1110	10	0.9	1.67E-03	1.17E-04	5.40E-05	3.42E-04	2.70E-05	1.00E-01	2.25E-02	6.03E-04	9.00E-06	-
	Electric induction oven[1]		10	0.9	1.67E-03	1.17E-04	5.40E-05	3.42E-04	2.70E-05	1.00E-01	2.25E-02	6.03E-04	9.00E-06	-
	Electric holding oven	-	-	*	*	*	*	*	*	*	*	*	*	-
	Pouring station	2000	20	4.2	7.77E-03	5.46E-04	2.52E-04	1.60E-03	1.26E-04	1.62E-02	1.30E-01	2.81E-03	4.20E-05	5.00E-03
	Mold machine	2010	10	1.4	2.59E-03	1.82E-04	8.40E-05	5.32E-04	4.20E-05	5.39E-03	4.34E-02	9.38E-04	1.40E-05	-
	Casting conveyor system	2015	10	1.4	2.59E-03	1.82E-04	8.40E-05	5.32E-04	4.20E-05	5.39E-03	4.34E-02	9.38E-04	1.40E-05	7.80E-02
	Cooling conveyor system	2020												
	Casting shakeout system	3010	10	3.2	5.92E-03	4.16E-04	1.92E-04	1.22E-03	9.60E-05	1.23E-02	9.92E-02	2.14E-03	3.20E-05	2.00E-01
	Sand waste and sand handling	4000, 4140, 5000	70	3.6	6.66E-03	4.68E-04	2.16E-04	1.37E-03	1.08E-04	1.39E-02	1.12E-01	2.41E-03	3.60E-05	-
	Shotblast unit	Final blast 3090	10	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
	Finish trim presses	8000	5.5	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
	Bench grinders	Cells 1,2,3,4,11,12	5.5	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
Plant 2, Line 4 (2013 line)	Electric induction furnace1	EU-N1	10	0.9	1.67E-03	1.17E-04	5.40E-05	3.42E-04	2.70E-05	1.00E-01	2.25E-02	6.03E-04	9.00E-06	-
	Sand handling system	EU-N2A	75	3.6	6.66E-03	4.68E-04	2.16E-04	1.37E-03	1.08E-04	1.39E-02	1.12E-01	2.41E-03	3.60E-05	-
	Return sand handling system	EU-N2B												-
	Pouring station	EU-N3	15	4.2	7.77E-03	5.46E-04	2.52E-04	1.60E-03	1.26E-04	1.62E-02	1.30E-01	2.81E-03	4.20E-05	5.00E-03
	Cooling line	EU-N4	15	1.4	2.59E-03	1.82E-04	8.40E-05	5.32E-04	4.20E-05	5.39E-03	4.34E-02	9.38E-04	1.40E-05	7.80E-02
	Casting shakeout system	EU-N5	15	3.2	5.92E-03	4.16E-04	1.92E-04	1.22E-03	9.60E-05	1.23E-02	9.92E-02	2.14E-03	3.20E-05	2.00E-01
	Bad heat shakeout system	EU-N5A	10	3.2	5.92E-03	4.16E-04	1.92E-04	1.22E-03	9.60E-05	1.23E-02	9.92E-02	2.14E-03	3.20E-05	-
	Shot blast unit	EU-N6	15	17	3.15E-02	2.21E-03	1.02E-03	6.46E-03	5.10E-04	6.55E-02	5.27E-01	1.14E-02	1.70E-04	-
			Weight % of PM:		0.185%	0.013%	0.006%	0.038%	0.003%	0.385%	3.100%	0.067%	0.001%	

Notes:
Metal HAP emission factors are based on the average metal HAP content for gray iron foundries, from EPA's SPECIATE database.
[1] Lead and manganese emission factors for electric induction furnaces were provided in AP-42, Section
[2] Organic HAPs emission factors are from the Background Information Document for the NESHAP for Iron and Steel Foundries, Table 5-4 (CERP, 1998).
* Potential emissions for the holding furnaces are included in the estimate for holding furnaces emissions

			PTE (tons/year)										
Line	Emission unit/process	Unit ID	Antimony	Arsenic	Cadmium	Chromium	Cobalt	Lead	Manganese	Nickel	Selenium	Total Metal HAPs	Organic HAPs
Plant 2, original line (1997 line)	Indoor charge handling	1000A	0.097	0.007	0.003	0.020	0.002	0.202	1.629	0.035	0.001	1.996	-
	Conversion Station	1150	0.810	0.057	0.026	0.166	0.013	1.686	13.578	0.293	0.004	16.635	-
	Electric induction oven	1110	0.073	0.005	0.002	0.015	0.001	4.380	0.986	0.026	0.0004	5.489	-
	Electric induction oven		0.073	0.005	0.002	0.015	0.001	4.380	0.986	0.026	0.0004	5.489	-
	Electric holding oven	-	*	*	*	*	*	*	*	*	*	*	-
	Pouring station	2000	0.681	0.048	0.022	0.140	0.011	1.416	11.406	0.247	0.004	13.974	0.4
	Mold machine	2010	0.113	0.008	0.004	0.023	0.002	0.236	1.901	0.041	0.001	2.329	-
	Casting conveyor system	2015	0.113	0.008	0.004	0.023	0.002	0.236	1.901	0.041	0.001	2.329	3.4
	Cooling conveyor system	2020											
	Casting shakeout system	3010	0.259	0.018	0.008	0.053	0.004	0.540	4.345	0.094	0.001	5.323	8.8
	Sand waste and sand handling	4000, 4140, 5000	2.042	0.143	0.066	0.419	0.033	4.249	34.217	0.740	0.011	41.921	-
	Shotblast unit	Final blast 3090	1.378	0.097	0.045	0.283	0.022	2.867	23.083	0.499	0.007	28.280	-
	Finish trim presses	8000	0.758	0.053	0.025	0.156	0.012	1.577	12.695	0.274	0.004	15.554	-
	Bench grinders	Cells 1,2,3,4,11,12	0.758	0.053	0.025	0.156	0.012	1.577	12.695	0.274	0.004	15.554	-
Plant 2, Line 4 (2013 line)	Electric induction furnace	EU-N1	0.073	0.005	0.002	0.015	0.001	4.380	0.986	0.026	0.000	5.489	-
	Sand handling system	EU-N2A	2.188	0.154	0.071	0.449	0.035	4.553	36.661	0.792	0.012	44.915	-
	Return sand handling system	EU-N2B											
	Pouring station	EU-N3	0.510	0.036	0.017	0.105	0.008	1.062	8.554	0.185	0.003	10.480	0.3
	Cooling line	EU-N4	0.170	0.012	0.006	0.035	0.003	0.354	2.851	0.062	0.001	3.493	5.1
	Casting shakeout system[3]	EU-N5	0.389	0.027	0.013	0.080	0.006	0.809	6.517	0.141	0.002	7.985	13.1
	Bad heat shakeout system[3]	EU-N5A											
	Shot blast unit	EU-N6	2.066	0.145	0.067	0.424	0.034	4.300	34.624	0.748	0.011	42.420	-
		Totals:	**12.552**	**0.882**	**0.407**	**2.578**	**0.204**	**38.805**	**209.614**	**4.546**	**0.068**	**269.7**	**31.2**

Notes:
[3] The 15 lb/yr throughput of poured metal will pass through only one of the shakeout units (normal or bad heat), therefore potential emissions are included for only one of the units.

Methodology:
PTE (tons/yr) = Capacity (tons metal (or sand)/hr) * Emission factor (lb/ton metal (or sand)) * 8760 hr/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Plant 2 - Ladle Heaters

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Emission unit	Emission Unit ID	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)
Ladle heater - Plant 2 - 1997	6600	2.0	17.2
Ladle heater - Plant 2 - 1997	6610	2.0	17.2
	Totals:	**4.000**	**34.4**

	Pollutant						
	PM*	PM_{10}*	Direct $PM_{2.5}$*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission (tons/yr)	0.03	0.1	0.13	0.01	1.7	0.1	1.4

*PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission (tons/yr)	3.607E-05	2.061E-05	1.288E-03	3.092E-02	5.840E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission (tons/yr)	8.588E-06	1.889E-05	2.405E-05	6.527E-06	3.607E-05
				Total HAPs:	**3.242E-02**

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emission (tons/yr)	2,061	0.0	0.0
Summed Potential Emissions (tons/yr)	2,061		
CO_2e Total (tons/yr)	2,073		

Notes:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Total Heat Input Capacity (MMBtu/hr) = ∑ (Heat Input Capacity Each (MMBtu/hr/unit) * Number of Units)
Total Potential Throughput (MMCF/yr) = Heat Input Capacity Each (MMBtu/hr) * Number of Units * 8,760 hrs/yr * High Heat Value (1 MMCF/1,020 MMBtu)
Potential Emission (tons/yr) = Total Potential Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs
CO_2e (tons/yr) = CO_2 Potential Emission (tons/yr) * CO_2 GWP (1) + CH_4 Potential Emission (tons/yr) * CH_4 GWP (25) + N_2O Potential Emission (tons/yr) * N_2O GWP (298).

Appendix A: Emissions Calculations
326 IAC 6-3-2 Limits

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Line	Emission unit/process	Unit ID	Process Weight Rate (ton/hr)	Allowable emissions (lb/hr)
	Core production	Core sand bins and P4, P5, P6, P7	2.01	6.54
Plant 1, Melting and Finishing	Indoor charge handling	-	20	30.51
	Melting system - 3 electric induction furnaces	P8	20	30.51
	Holding system - electric holding furnaces	P9	20	30.51
	Inoculation - metal treatment ladles	P11	20	30.51
	Grinders	Grinder 3	1.25	4.76
		Grinder 4	1.25	4.76
		Grinder 5	1.25	4.76
		Grinder 6	1.25	4.76
		Grinder 7	1.25	4.76
		Grinder 8	3.75	9.94
		Grinder 9	1.25	4.76
Plant 1, Casting Line	Sand System	P32B, P33B, P34B, P35B, P36B, P37B, P39B	70	47.77
	Pouring Station	P13B	85	49.66
	Cooling line	P14B	85	49.66
	Shakeout unit	P16B	85	49.66
	Bad heat shakeout unit	-	85	49.66
	Casting conveyors and desprue operations	P17B, P18B, P19B, P20B, P21B, P22B	15	25.16
	Shotblast units	P40, P41, P42	9	17.87
	Wheelabrator	-	11	20.44
Plant 2, original line (1997 line)	Indoor charge handling	1000A	20	30.51
	Conversion Station	1150	25	35.43
	Electric induction furnace	1110	20	30.51
	Electric holding furnace	-	10	19.18
	Pouring station	2000	20	30.51
	Mold machine	2010	80	49.06
	Casting conveyor system	2015	80	49.06
	Cooling conveyor system	2020		
	Casting shakeout system	3010	80	49.06
	Sand waste and sand handling	4000, 4140, 5000	70	47.77
	Shotblast unit	Final blast 3090	10	19.18
	Finish trim presses	8000	5.5	12.85
	Bench grinders	Cells 1,2,3,4,11,12	5.5	12.85
Plant 2, Line 4 (2013 line)	Electric induction furnace	EU-N1	10	19.18
	Sand handling system	EU-N2A	75	48.43
	Return sand handling system	EU-N2B		
	Pouring station	EU-N3	90	83.58
	Cooling line	EU-N4	90	83.58
	Casting shakeout system	EU-N5	90	83.58
	Bad heat shakeout system	EU-N5A	85	80.44
	Shot blast unit	EU-N6	15	25.16

Methodology:
For process weight ≤30 tons/hr, Allowable emission (lb/hr) = 4.10 * Process weight rate (ton/hr)$^{0.67}$, pursuant to 326 IAC 6-3-2(e)
For process weight >30 tons/hr, Allowable emission (lb/hr) = 55.0 * Process weight rate (ton/hr)$^{0.11}$ - 40, pursuant to 326 IAC 6-3-2(e)

Appendix A: Emissions Calculations
Insignificant Natural Gas Combustion

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Emission unit	Emission Unit ID	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)
Boiler	P40	0.9	7.7
Boiler	P41	1.2	10.3
Scrap metal dryer	-	1	8.6
Heater	P50	2.5	21.5
Heat treat furnace	-	0.036	0.3
	Totals:	**5.636**	**48.4**

	Pollutant						
	PM*	PM_{10}*	Direct $PM_{2.5}$*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission (tons/yr)	0.05	0.2	0.18	0.01	2.4	0.1	2.0

*PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission (tons/yr)	5.082E-05	2.904E-05	1.815E-03	4.356E-02	8.229E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission (tons/yr)	1.210E-05	2.662E-05	3.388E-05	9.197E-06	5.082E-05
				Total HAPs:	**4.567E-02**

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emission (tons/yr)	2,904	0.1	0.1
Summed Potential Emissions (tons/yr)	2,904		
CO_2e Total (tons/yr)	2,921		

Notes:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Total Heat Input Capacity (MMBtu/hr) = ∑ (Heat Input Capacity Each (MMBtu/hr/unit) * Number of Units)
Total Potential Throughput (MMCF/yr) = Heat Input Capacity Each (MMBtu/hr) * Number of Units * 8,760 hrs/yr * High Heat Value (1 MMCF/1,020 MMBtu)
Potential Emission (tons/yr) = Total Potential Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs
CO_2e (tons/yr) = CO_2 Potential Emission (tons/yr) * CO_2 GWP (1) + CH_4 Potential Emission (tons/yr) * CH_4 GWP (25) + N_2O Potential Emission (tons/yr) * N_2O GWP (298).

Appendix A: Emissions Calculations
Degreaser

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Material	Annual usage (gal/yr)	Density (lb/gal)	VOC content	Xylene content	PTE of VOC (ton/yr)	PTE of Xylene (ton/yr)
Mineral spirits	120	6.3	100%	1%	0.378	0.00378

Methodology
PTE of VOC (ton/yr) = Annual usage (gal/yr) * Density (lb/gal) * VOC content * 1 ton/2000 lb
PTE of xylene (ton/yr) = PTE of VOC (ton/yr) * Xylene content

Appendix A: Emissions Calculations
Diesel-fired emergency generators

Company Name: INTAT Precision, Inc.
Address City IN Zip: 2148 State Rd. 3 North
Permit Number: T139-34150-00011
Reviewer: Ryan Graunke

Emission unit	Capacity (bhp)	Heat input capacity (MMBtu/hr)
EG1	429	3.00
EG2	429	3.00
EG3	429	3.00
Totals:	**1287**	**9.01**

	Pollutant						
	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO
Emission factor (lb/bhp-hr)	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential emissions (tons/yr)	0.71	0.71	0.71	0.66	9.97	0.81	2.15

	HAPs							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs**
Emission factor (lb/MMBtu)	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential emissions (tons/yr)	0.0021	0.0009	0.0006	0.0001	0.0027	0.0017	0.0002	0.0004
							Total HAPs (tons/yr):	**0.0087**

**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission factor (lb/MMBtu/hr)	1.64E+02	6.61E-03	1.32E-03
Potential emissions (tons/yr)	369.37	1.49E-02	2.98E-03
Summed potential emissions (tons/yr)	369		
CO_2e total (tons/yr)	371		

Notes:
These internal combustion engines are for emergency use only and do not operate more than 500 hours per year.
Fuel heat value = 0.137 MMBtu/gal
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH_4 and N_2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Assume a brake specific fuel consumption of 7,000 Btu/hp-hr (AP-42 Table 3.3-1).

Calculations:
Heat input capacity (MMBtu/hr) = Capacity (bhp)* 0.007 MMBtu/hp-hr
Potential emissions (tons/yr) = Total capacity (bhp) or Total heat input capacity (MMBtu/hr) * Emission factor (lb/bhp-hr or lb/MMBtu/hr) * 500 hrs/yr * 1 ton/2000 lbs
CO_2e (tons/yr) = CO_2 Potential Emission ton/yr * CO_2 GWP (1) + CH_4 Potential Emission ton/yr * CH_4 GWP (25) + N_2O Potential Emission ton/yr * N_2O GWP (298).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Brad Rist
INTAT Precision Inc.
PO Box 488
Rushville, Indiana 46173

DATE: October 8, 2014

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

SUBJECT: Final Decision
Title V- Renewal
139-34150-00011

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:
DB Rist, Director of Operations / INTAT Precision Inc.
Erin Surinak / Environmental Resources Management
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.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

October 8, 2014

TO: Rushville Public Library

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

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

Applicant Name: INTAT Precision, Inc.
Permit Number: 139-34150-00011

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 6/13/2013

Mail Code 61-53

IDEM Staff	AWELLS 10/8/2014 INTAT Precision Incorporated 139-34150-00011 Final		
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**

AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING

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1		Brad Rist INTAT Precision Incorporated PO Box 488 Rushville IN 46173 (Source CAATS) confirmed delivery									
2		DB Rist Director of Operations INTAT Precision Incorporated PO Box 488 Rushville IN 46173 *(RO CAATS)*									
3		Rush County Commissioners 101 East Second Street Rushville IN 46173 *(Local Official)*									
4		Rush County Health Department Courthouse, Room 5 Rushville IN 46173-1854 *(Health Department)*									
5		Rushville Public Library 130 W 3rd St Rushville IN 46173-1899 *(Library)*									
6		Rushville Town Council 133 W. First St. Rushville IN 46173 *(Local Official)*									
7		Erin Surinak Environmental Resources Management (ERM) 11350 N Meridian Street Suite 320 Carmel IN 46032 *(Consultant)*									
8		Mrs. Bonnie Miller P.O. Box 15 Falmouth IN 46127 *(Affected Party)*									
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