



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: June 28, 2012

RE: Ryobi Die Casting (USA), Inc / 145-31356-00031

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Lynn Funk
Ryobi Die Casting (USA), Inc.
800 West Mausoleum Road
Shelbyville, IN 46176

June 28, 2012

Re: 145-31356-00031
First Significant Permit Revision to
F145-30081-00031

Dear Lynn Funk:

Ryobi Die Casting (USA), Inc. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F145-30081-00031 on August 23, 2011 for a stationary aluminum die-casting plant that uses clean aluminum ingots and is not primarily engaged in the metal recovery process, located at 800 West Mausoleum Road, Shelbyville, Indiana. On January 12, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to modify its existing FESOP to add two (2) new aluminum melt furnaces, to remove one (1) aluminum melt furnace, change its fuel types and adjust current FESOP limits, and change various permit conditions, based on current plant information. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1; a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Jack Harmon, of my staff, at 317-233-4228 or 1-800-451-6027, and ask for extension 3-4228.

Sincerely,

Iryn Callung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/jh

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



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

Ryobi Die Casting
800 West Mausoleum Road
Shelbyville, Indiana 46176

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F145-30081-00031	
Original signed by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 23, 2011 Expiration Date: August 23, 2021

First Significant Permit Revision No.: 145-31356-00031	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 28, 2012 Expiration Date: August 23, 2021

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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 2-8-3(b)]

The Permittee owns and operates a stationary aluminum die-casting plant and uses clean aluminum ingots and is not primarily engaged in the metal recovery process.

Source Address:	800 West Mausoleum Road, Shelbyville, Indiana 46176
General Source Phone Number:	317-392-8398
SIC Code:	3363 (Aluminum Die Castings)
County Location:	Shelby
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

This aluminum die casting company consists of four (4) plants which represent four physical buildings. Since these four (4) plants are located on the same property and under common control of the same entity, they will be considered one (1) source in this FESOP.

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

- (a) Ten (10) shotblasting lines, constructed after 1986, consisting of the following:
 - (1) One (1) shotblasting line, identified as SBS-6, with maximum process rate of 3,239 pounds of parts per hour, controlled by scrubber WDC-4, and exhausting through stack SV# WDC-4.
 - (2) One (1) shotblasting line, identified as SBS-7, with maximum process rate of 1900 pounds of parts per hour, controlled by scrubber WDC-5, and exhausting through stack SV# WDC-5.
 - (3) Two (2) shotblasting lines, identified as SBS-9 and SBS-10, with maximum process rates of 1,640 and 4,000 pounds of parts per hour respectively, controlled by scrubber WDC-2, and exhausting through stack SV# WDC-2.
 - (4) Two (2) shotblasting lines, identified as 03-SBS-01 and 03-SBS-04, with maximum process rates of 5,670 and 2,403 pounds of parts per hour respectively, both controlled by scrubber 03-WDC-01, and exhausting through stack SV# 03-WDC-01.
 - (5) Two (2) shotblasting lines, identified as 03-SBS-02 and 03-SBS-03, with maximum process rates of 1,280 and 1,920 pounds of parts per hour respectively, both controlled by scrubber 03-WDC-02, and exhausting through stack SV# 03-WDC-02.

- (6) One (1) shotblasting line, identified as 03-SBS-06, with a maximum process rate of 3,008 pounds of parts per hour, controlled by scrubber 03-WDC-03, and exhausting through stack SV# 03-WDC-03.
 - (7) One (1) shotblasting line, identified as SBS-11 with maximum process rate of 1,640 pounds of parts per hour, controlled by scrubber WDC-5, and exhausting through stack SV# WDC-5.
- (b) Eight (8) natural gas-fired aluminum melting furnaces, consisting of the following:
- (1) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, and approved for modification in 2012, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, and with a maximum flux usage of 10.0 pounds per hour, with a maximum heat input capacity of 14.4 MMBtu/hr, and exhausting through stack SV# MF-5.
 - (2) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, and approved for modification in 2012, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, with a maximum heat capacity of 19.3 MMBtu/hr, and exhausting through stack SV# MF-6.
 - (3) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, and approved for modification in 2012, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, with a maximum heat input capacity of 15.0 MMBtu/hr, and exhausting through stack SV# MF-1S.
 - (4) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, and approved for modification in 2012, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, with a maximum heat input capacity of 23.8 MMBtu/hr, and exhausting through stack SV# MF-2M.
 - (5) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, and approved for modification in 2012, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, and with a maximum flux usage of 7.0 pounds per hour, with a maximum heat capacity of 13.4 MMBtu/hr, and exhausting through stack SV# MF-3N.
 - (6) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, and approved for modification in 2012, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, with a maximum heat input capacity of 18 MMBtu/hr, and exhausting through stack SV# MF-1.
 - (7) One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.
 - (8) One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per

hour, and exhausting through stack SV#MF-9.

- (c) One (1) aluminum scrap handling process, with a maximum throughput rate of 12,500 pounds of trimmed aluminum parts per hour. This process has negligible emissions.
- (d) One (1) aluminum die casting process, constructed in 1986, with a maximum throughput rate of 27.5 tons of parts per hour. This closed process has no particulate emissions.

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

This stationary source also includes the following insignificant activities:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour each:
 - (1) One hundred and four (104) natural gas-fired combustion units in Plant 1, with a total heat capacity of 104.36 MMBtu/hr, including the following:
 - (A) Three (3) pre-heat stations, each with a maximum heat input of 0.008 MMBtu/hr.
 - (B) One (1) make-up air unit, with a maximum heat input of 1.02 MMBtu/hr.
 - (C) Three (3) make-up air units, each with a maximum heat input of 1.972 MMBtu/hr.
 - (D) One (1) make-up air unit, with a maximum heat input of 2.066 MMBtu/hr.
 - (E) Four (4) make-up air units, each with a maximum heat input of 2.137 MMBtu/hr.
 - (F) Sixteen (16) make-up air units, each with a maximum heat input of 2.1875 MMBtu/hr.
 - (G) Two (2) make-up air units, each with a maximum heat input of 2.324 MMBtu/hr.
 - (H) One (1) make-up air unit, with a maximum heat input of 2.5 MMBtu/hr.
 - (I) Two (2) make-up air units, each with a maximum heat input of 3.052 MMBtu/hr.
 - (J) Six (6) make-up air units, each with a maximum heat input of 3.327 MMBtu/hr.
 - (K) One (1) make-up air unit, with a maximum heat input of 4.1 MMBtu/hr.
 - (L) One (1) make-up air unit, with a maximum heat input of 5 MMBtu/hr.
 - (M) Fifty-one (51) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
 - (N) Ten (10) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
 - (O) One (1) office heater, with a maximum heat input of 0.215 MMBtu/hr.
 - (P) One (1) office heater, with a maximum heat input of 0.16 MMBtu/hr.

- (2) Fourteen (14) natural gas-fired combustion units in Plant 2, with a total heat capacity of 11.12 MMBtu/hr, including the following:
 - (A) One (1) make-up air unit, with a maximum heat input of 0.75 MMBtu/hr.
 - (B) One (1) air curtain, with a maximum heat input of 3.5 MMBtu/hr.
 - (C) One (1) air curtain, with a maximum heat input of 3.0 MMBtu/hr.
 - (D) One (1) air curtain, with a maximum heat input of 2.203 MMBtu/hr.
 - (E) Nine (9) space unit heaters, each with a maximum heat input of 0.2 MMBtu/hr.
 - (F) One (1) office heater, with a maximum heater input of 0.0514 MMBtu/hr.
- (3) Eighty-eight (88) natural gas-fired combustion units in Plant 3 (with no back-up fuel), with a total heat capacity of 117.12 MMBtu/hr, including the following:
 - (A) Two (2) pre-heat stations, each with a maximum heat input of 2.0 MMBtu/hr.
 - (B) Six (6) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
 - (C) Eight (8) door heaters, each with a maximum heat input of 0.814 MMBtu/hr.
 - (D) One (1) make-up air unit, with a maximum heat input of 0.751 MMBtu/hr.
 - (E) Two (2) make-up air units, each with a maximum heat input of 1.503 MMBtu/hr.
 - (F) Six (6) make-up air units, each with a maximum heat input of 1.784 MMBtu/hr.
 - (G) One (1) make-up air unit, with a maximum heat input of 1.972 MMBtu/hr.
 - (H) Three (3) make-up air units, each with a maximum heat input of 2.536 MMBtu/hr.
 - (I) Four (4) make-up air units, each with a maximum heat input of 3.287 MMBtu/hr.
 - (J) Sixteen (16) make-up air units, each with a maximum heat input of 3.945 MMBtu/hr.
 - (K) Thirty-nine (39) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
- (4) Seven (7) natural gas-fired combustion units in Plant 4, with a total heat capacity of 1.5 MMBtu/hr, including the following:
 - (A) Five (5) unit heaters, each with a maximum heat input of 0.216 MMBtu/hr.

- (B) One (1) door heater, with a maximum heat input of 0.39 MMBtu/hr.
- (C) One (1) AC/heater, with a maximum heat input of 0.031 MMBtu/hr.
- (b) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (c) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (d) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (e) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (f) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).
- (g) Cleaners and solvents having a vapor pressure equal to or less than 2kPa (15mm Hg or 0.3 psi) measured at 38 degrees C (100°F) or a vapor pressure equal to or less than 0.7 kPa (5mm Hg, or 0.1 psi) measured at 20°C (68°F), the use of which for all cleaners and solvents combined does not exceed 145 gallons per twelve (12) consecutive month period.
- (h) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (i) Quenching operations used with heat treating processes.
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (k) Paved roads and parking lots with public access.
- (l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (m) Stationary fire pumps.
- (n) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (o) One (1) natural gas-fired emergency generator, considered a spark ignition internal combustion engine, manufactured after 2006, constructed in 2010, with a maximum heat input capacity of 0.29 MMBtu/hr, using no controls, and exhausting inside the building.

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.

Under 40 CFR 63, Subpart ZZZZ, this is considered an affected source.

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

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

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, F145-30081-00031, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

B.5 Severability [326 IAC 2-8-4(4)]

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

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

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

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

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

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

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

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. 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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

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

- (a) 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.12 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

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

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, 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 2-8-4(3)(C)(ii) and must contain the following:

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

- (a) All terms and conditions of permits established prior to F145-30081-00031 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

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

Request for renewal shall be submitted to:

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

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

- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

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

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

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

Indianapolis, Indiana 46204-2251

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

- (b) Emission Trades [326 IAC 2-8-15 (b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15 (b).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15 (c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

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

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air

pollution control equipment), practices, or operations regulated or required under this permit;

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

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

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

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

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

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

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

C.2 Overall Source Limit [326 IAC 2-8]

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management

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

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

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

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

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

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

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

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

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

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

- (a) The Permittee shall 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.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

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

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

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

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

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

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

C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information, which may include the following:
- (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.
 - (CC) Copies of all reports required by the FESOP.

Records of required monitoring information, which may include the following:

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

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

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

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

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

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.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 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

- (a) Ten (10) shotblasting lines, constructed after 1986, consisting of the following:
- (1) One (1) shotblasting line, identified as SBS-6, with maximum process rate of 3,239 pounds of parts per hour, controlled by scrubber WDC-4, and exhausting through stack SV# WDC-4.
 - (2) One (1) shotblasting line, identified as SBS-7, with maximum process rate of 1900 pounds of parts per hour, controlled by scrubber WDC-5, and exhausting through stack SV# WDC-5.
 - (3) Two (2) shotblasting lines, identified as SBS-9 and SBS-10, with maximum process rates of 1,640 and 4,000 pounds of parts per hour respectively, controlled by scrubber WDC-2, and exhausting through stack SV# WDC-2.
 - (4) Two (2) shotblasting lines, identified as 03-SBS-01 and 03-SBS-04, with maximum process rates of 5,670 and 2,403 pounds of parts per hour respectively, both controlled by scrubber 03-WDC-01, and exhausting through stack SV# 03-WDC-01.
 - (5) Two (2) shotblasting lines, identified as 03-SBS-02 and 03-SBS-03, with maximum process rates of 1,280 and 1,920 pounds of parts per hour respectively, both controlled by scrubber 03-WDC-02, and exhausting through stack SV# 03-WDC-02.
 - (6) One (1) shotblasting line, identified as 03-SBS-06, with a maximum process rate of 3,008 pounds of parts per hour, controlled by scrubber 03-WDC-03, and exhausting through stack SV# 03-WDC-03.
 - (7) One (1) shotblasting line, identified as SBS-11, with a maximum process rate of 1,640 pounds of parts per hour, controlled by scrubber WDC-5, and exhausting through stack SV# WDC-5.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 PM, PM10 and PM2.5 Emissions [326 IAC 2-2] [326 IAC 2-8-4]

- (a) Pursuant to 326 IAC 2-8, the PM10 and PM2.5 emissions from the shotblasting lines shall not exceed the emission limits listed in the table below:

Unit ID	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
SBS-6	0.27	0.27
SBS-7	0.16	0.16
SBS-9	0.14	0.14
SBS-10	0.34	0.34
SBS-11	0.14	0.14
03-SBS-01	0.48	0.48
03-SBS-02	0.11	0.11
03-SBS-03	0.16	0.16
03-SBS-04	0.20	0.20
03-SBS-06	0.26	0.26

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

- (b) In order to render 326 IAC 2-2 not applicable, the PM emissions from the shotblasting lines shall not exceed the emission limits listed in the table below:

Unit ID	PM Emission Limit (lbs/hr)
SBS-6	0.39
SBS-7	0.23
SBS-9	0.20
SBS-10	0.48
SBS-11	0.20
03-SBS-01	0.68
03-SBS-02	0.15
03-SBS-03	0.23
03-SBS-04	0.29
03-SBS-06	0.36

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

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of following shotblasting lines shall not exceed the pound per hour limits listed in the table below:

Unit ID	Max. Throughput Rate (lbs/hr)	Particulate Emission Limit (lbs/hr)
SBS-6	3,239	5.66
SBS-7	1,900	3.96
SBS-9	1,640	3.59
SBS-10	4,000	6.52
SBS-11	1,640	3.59
03-SBS-01	5,670	8.24
03-SBS-02	1,280	3.04
03-SBS-03	1,920	3.99
03-SBS-04	2,403	4.64
03-SBS-06	3,008	5.39

The pounds per hour limitations were calculated using the following equations:

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

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

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.4 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, each of the following shotblasting lines shall be controlled by the associated scrubber, as listed in the table below, at all times when these units are in operation:

Unit ID	Scrubber ID
SBS-6	WDC-4
SBS-7	WDC-5
SBS-11	
SBS-9	WDC-2
SBS-10	
03-SBS-01	03-WDC-01
03-SBS-04	
03-SBS-02	03-WDC-02
03-SBS-03	
03-SBS-06	03-WDC-03

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

D.1.5 Visible Emissions Notations

- (a) Daily visible emission notations of the scrubber stack exhausts (stacks SV# WDC-5, WDC-2, WDC-4, 03-WDC-01, 03-WDC-02, and 03-WDC-03) shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.6 Parametric Monitoring

The Permittee shall record the pressure drop across each of the scrubbers used to control emissions from shotblasting lines at least once per day when the associated shotblasting lines are in operation. The pressure drop range and the minimum flow rate of the scrubber fluid for each scrubber are listed in the table below. When for any one reading, the pressure drop across the scrubber is outside the normal range, established during the latest stack test, the Permittee shall take reasonable response. Section C - Response to Excursions and Exceedances contains

the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Scrubber ID	Process ID	Pressure Drop ranges (inches of water)	Minimum Flow Rate (gallons/min)
WDC-4	SBS-6	7.5-15.0	90
WDC-5	SBS-7 SBS-11	8-15	150
WDC-2	SBS-9 SBS-10	8-15	150
03-WDC-01	03-SBS-01 03-SBS-04	8-15	150
03-WDC-02	03-SBS-02 03-SBS-03	8-15	150
03-WDC-03	03-SBS-06	7.5-15.0	90

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

D.1.7 Scrubber Detection

Failed units and the associated process shall be shut down immediately until the failed units have 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).

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

D.1.8 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.6, the Permittee shall maintain daily records of the visible emissions notations of the scrubber stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (i.e. the process did not operate that day).
- (b) To document the compliance status with Condition D.1.7, the Permittee shall maintain the daily records of the pressure drop across the scrubbers controlling the shot blasters. 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 obligation with regard to the records required by this condition.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

- (b) Eight (8) natural gas-fired aluminum melting furnaces, consisting of the following:
- (1) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, and approved for modification in 2012, with a maximum heat input capacity of 14.4 MMBtu/hr, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 10.0 pounds per hour, and exhausting through stack SV#MF-5.
 - (2) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, and approved for modification in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-6.
 - (3) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 15.0 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-1S.
 - (4) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 23.8 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-2M.
 - (5) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, and approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 7.0 pounds per hour, and exhausting through stack SV#MF-3N.
 - (6) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, and approved for construction in 2012, with a maximum heat input capacity of 18.0 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-1.
 - (7) One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.
 - (8) One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per hour, and exhausting through stack SV#MF-9.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 PM, PM10, PM2.5 Limits [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8 (FESOP), the annual throughput for melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 150,000 tons of aluminum per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (i) PM10 emissions from the melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 1.1 pounds per ton of aluminum charged.
 - (ii) PM2.5 emissions from the melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 1.1 pounds per ton of aluminum charged.

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

- (b) In order to render 326 IAC 2-2 not applicable, the PM emissions from the melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 1.1 pounds per ton of aluminum charged.

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

D.2.2 Particulate Emissions Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the melting furnaces shall not exceed the following pounds per hour, when operating at the process weight rates shown below. The pound per hour limitation was calculated with the equation below.

Emission Unit	Metal Throughput (tons/hour)	Flux Throughput (tons/hour)	Total Process Weight Rate (tons/hour)	PM Emissions Limit (lbs/hr)
Melt Furnace MF-5	5.0	0.005	5.005	12.06
Melt Furnace MF-6	7.5	0.008	7.508	15.82
Melt Furnace MF-1S	4.5	0.005	4.505	11.23
Melt Furnace MF-2M	4.5	0.005	4.505	11.23
Melt Furnace MF-3N	3.5	0.004	3.504	9.49
Melt Furnace MF-1	7.5	0.008	7.508	15.82
Melt Furnace MF-8	3.0	0.003	3.003	8.56
Melt Furnace MF-9	6.0	0.006	6.006	13.62

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

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

D.2.3 Material Usage [40 CFR 63, Subpart RRR]

The Permittee shall melt only clean charge aluminum ingots, or internally-generated clean scrap as defined in 40 CFR 63, Subpart RRR, in the melt furnaces at all times. Compliance with this condition shall render 40 CFR 63, Subpart RRR not applicable.

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

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

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]

In order to demonstrate the compliance status with Conditions D.2.1 and D.2.2, the Permittee shall perform PM, PM10, and PM2.5 testing for one of the melt furnaces, identified as MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, or MF-9, within 180 days of the issuance of this significant permit revision number 145-31356-00031. This testing shall be conducted utilizing methods as approved by the Commissioner. As long as the melt process does not change, and as long as the melt raw materials do not change, repeat testing is not required. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.2.6 Visible Emissions Notations

- (a) Daily visible emission notations of each melt furnace stack exhausts (stacks SV# MF-1, SV#MF-5, SV#MF-6, SV#MF-1S, SV#MF-2M, SV#MF-3N, SV#MF-8, and SV#MF-9) shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.7 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.2.1(a), the Permittee shall maintain monthly records of the aluminum melted in each of the melt furnaces. The Permittee shall include in its monthly record when there is no entry and the reason for the lack of an entry (i.e. the melt furnace did not operate that day).

- (b) In order to document the compliance status with Condition D.2.6, the Permittee shall maintain monthly records of the visible emissions notations. The Permittee shall include in its monthly record when there is no visible emissions notation and the reason for the lack of a record (i.e. the melt furnace did not operate that day).
- (c) Section C – General Record Keeping Requirements contains the Permittee's obligation required by this condition.

D.2.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1(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.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

- (b) Eight (8) natural gas-fired aluminum melting furnaces, consisting of the following:
- (1) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, and approved for modification in 2012, with a maximum heat input capacity of 14.4 MMBtu/hr, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 10.0 pounds per hour, and exhausting through stack SV#MF-5.
 - (2) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, and approved for modification in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-6.
 - (3) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 15.0 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-1S.
 - (4) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 23.8 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-2M.
 - (5) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, and approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 7.0 pounds per hour, and exhausting through stack SV#MF-3N.
 - (6) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, and approved for construction in 2012, with a maximum heat input capacity of 18.0 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-1.
 - (7) One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.
 - (8) One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per hour, and exhausting through stack SV#MF-9.

Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) One hundred and four (104) natural gas-fired combustion units in Plant 1, with a total heat capacity of 104.36 MMBtu/hr, including the following:
 - (A) Three (3) pre-heat stations, each with a maximum heat input of 0.008 MMBtu/hr.
 - (B) One (1) make-up air unit, with a maximum heat input of 1.02 MMBtu/hr.
 - (C) Three (3) make-up air units, each with a maximum heat input of 1.972 MMBtu/hr.
 - (D) One (1) make-up air unit, with a maximum heat input of 2.066 MMBtu/hr.
 - (E) Four (4) make-up air units, each with a maximum heat input of 2.137 MMBtu/hr.
 - (F) Sixteen (16) make-up air units, each with a maximum heat input of 2.1875 MMBtu/hr.
 - (G) Two (2) make-up air units, each with a maximum heat input of 2.324 MMBtu/hr.
 - (H) One (1) make-up air unit, with a maximum heat input of 2.5 MMBtu/hr.
 - (I) Two (2) make-up air units, each with a maximum heat input of 3.052 MMBtu/hr.
 - (J) Six (6) make-up air units, each with a maximum heat input of 3.327 MMBtu/hr.
 - (K) One (1) make-up air unit, with a maximum heat input of 4.1 MMBtu/hr.
 - (L) One (1) make-up air unit, with a maximum heat input of 5 MMBtu/hr.
 - (M) Fifty-one (51) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
 - (N) Ten (10) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
 - (O) One (1) office heater, with a maximum heat input of 0.215 MMBtu/hr.
 - (P) One (1) office heater, with a maximum heat input of 0.16 MMBtu/hr.
 - (2) Fourteen (14) natural gas-fired combustion units in Plant 2, with a total heat capacity of 11.12 MMBtu/hr, including the following:
 - (A) One (1) make-up air unit, with a maximum heat input of 0.75 MMBtu/hr.
 - (B) One (1) air curtain, with a maximum heat input of 3.5 MMBtu/hr.
 - (C) One (1) air curtain, with a maximum heat input of 3.0 MMBtu/hr.
 - (D) One (1) air curtain, with a maximum heat input of 2.203 MMBtu/hr.
 - (E) Nine (9) space unit heaters, each with a maximum heat input of 0.2 MMBtu/hr.

- (F) One (1) office heater, with a maximum heater input of 0.0514 MMBtu/hr.
- (3) Eighty-eight (88) natural gas-fired combustion units in Plant 3 (with no back-up fuel), with a total heat capacity of 117.12 MMBtu/hr, including the following:
 - (A) Two (2) pre-heat stations, each with a maximum heat input of 2.0 MMBtu/hr.
 - (B) Six (6) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
 - (C) Eight (8) door heaters, each with a maximum heat input of 0.814 MMBtu/hr.
 - (D) One (1) make-up air unit, with a maximum heat input of 0.751 MMBtu/hr.
 - (E) Two (2) make-up air units, each with a maximum heat input of 1.503 MMBtu/hr.
 - (F) Six (6) make-up air units, each with a maximum heat input of 1.784 MMBtu/hr.
 - (G) One (1) make-up air unit, with a maximum heat input of 1.972 MMBtu/hr.
 - (H) Three (3) make-up air units, each with a maximum heat input of 2.536 MMBtu/hr.
 - (I) Four (4) make-up air units, each with a maximum heat input of 3.287 MMBtu/hr.
 - (J) Sixteen (16) make-up air units, each with a maximum heat input of 3.945 MMBtu/hr.
 - (K) Thirty-nine (39) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
- (4) Seven (7) natural gas-fired combustion units in Plant 4, with a total heat capacity of 1.5 MMBtu/hr, including the following:
 - (A) Five (5) unit heaters, each with a maximum heat input of 0.216 MMBtu/hr.
 - (B) One (1) door heater, with a maximum heat input of 0.39 MMBtu/hr.
 - (C) One (1) AC/heater, with a maximum heat input of 0.031 MMBtu/hr.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the amount of natural gas used in all the melting furnaces MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, and MF-9, and all insignificant combustion units at Plants 1, 2, 3, and 4, excluding the emergency generator, shall not exceed 1461.2 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month and:
 - (1) NO_x emissions shall not exceed 100 lb per MMCF.
 - (2) CO emissions shall not exceed 84 lb per MMCF.

Compliance with these limits, combined with the potential to emit NO_x and CO emissions

from all other existing units at this source, shall limit the source-wide total potential to emit of NO_x and CO to less than 100 tons per 12 consecutive month period, each and shall render 326 IAC 2-7 (Part 70 Program), not applicable.

- (3) CO₂ emissions from these combustion units shall not exceed 120,000 lb/mmcf.
- (4) CH₄ emissions from these combustion units shall not exceed 2.3 lb/mmcf.
- (5) N₂O emissions from these combustion units shall not exceed 2.2 lb/mmcf.
- (6) Global Warming Potential (GWP) for CO₂ shall not exceed 1.
- (7) Global Warming Potential (GWP) for CH₄ shall not exceed 21.
- (8) Global Warming Potential (GWP) for N₂O shall not exceed 310.

Compliance with these limits, combined with the limited potential to emit CO₂e emissions from all other existing units at this source, shall limit the source-wide total potential to emit of CO₂e to less than 100,000 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2, not applicable.

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

D.3.2 Record Keeping Requirements

- (a) To document the compliance status with the Condition D.3.1, the Permittee shall maintain monthly records of the total natural gas usage of the entire source, except for the emergency generator.
- (b) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

D.3.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no 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.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

- (d) One (1) aluminum die casting process, constructed in 1986, with a maximum throughput rate of 27.5 tons of parts per hour.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

There are no specific applicable requirements for the unit at this time.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- (b) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (c) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (d) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (e) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (f) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).
- (g) Cleaners and solvents having a vapor pressure equal to or less than 2kPa (15mm Hg or 0.3 psi) measured at 38 degrees C (100°F) or a vapor pressure equal to or less than 0.7 kPa (5mm Hg, or 0.1 psi) measured at 20°C (68°F), the use of which for all cleaners and solvents combined does not exceed 145 gallons per twelve (12) consecutive month period.
- (h) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (i) Quenching operations used with heat treating processes.
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (k) Paved roads and parking lots with public access.
- (l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (m) Stationary fire pumps.
- (n) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 326 IAC 8-3-2 (Cold Cleaning Operations)

Any degreaser using VOC containing solvents is considered a cold cleaning operation. The cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;

- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (a) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.5.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions from each of the brazing, cutting, soldering and welding processes shall not exceed the pounds per hour emission rate calculated based on the following equation:

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

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

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (o) One (1) natural gas-fired emergency generator, considered a spark ignition internal combustion engine, manufactured after 2006, constructed in 2010, with a maximum heat input capacity of 0.29 MMBtu/hr, using no controls, and exhausting inside the building.

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.

Under 40 CFR 63, Subpart ZZZZ, this 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.)

New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]

E.1.1 New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]

Pursuant to 40 CFR 60, the Permittee shall comply with the provisions of New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ], which are incorporated by reference as 326 IAC 12. The provisions of 40 CFR 60, Subpart JJJJ are shown in their entirety in Attachment A to this permit.

Applicable portions of the NSPS are the following:

- (a) 40 CFR 60.4230(4)(iii),(iv)
- (b) 40 CFR 60.4233(d),(h)
- (c) 40 CFR 60.4234
- (d) 40 CFR 60.4243(a)(1),(a)(2),(b)(1)
- (e) 40 CFR 60.4245(a),(d)
- (f) 40 CFR 60.4246
- (g) 40 CFR 60.4248
- (h) 40 CFR 60, Tables 2, 3

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the emergency generator except as otherwise specified in 40 CFR 60, Subpart JJJJ.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (o) One (1) natural gas-fired emergency generator, considered a spark ignition internal combustion engine, manufactured after 2006, constructed in 2010, with a maximum heat input capacity of 0.29 MMBtu/hr, using no controls, and exhausting inside the building;

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.

Under 40 CFR 63, Subpart ZZZZ, this 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 Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements for Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

E.2.1 National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, which are incorporated by reference as 326 IAC 20, as specified as follows., which are incorporated by reference as 326 IAC 20, as specified as follows. The provisions of 40 CFR 63, Subpart ZZZZ are shown in their entirety in Attachment B to this permit.

- (a) 40 CFR 63.6580
- (b) 40 CFR 63.6585
- (c) 40 CFR 63.6590(a)(2)(iii) and (c)(1)

Pursuant to 40 CFR 63.6665, the natural gas-fired emergency generator does not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

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

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

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-30081-00031

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

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

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-30081-00031

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-31356-00031
Facility: Melt Furnaces MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, and MF-9
Parameter: Total Aluminum charged
Limit: Annual throughput not to exceed 150,000 tons per twelve (12) consecutive months with compliance determined at the end of each month.

YEAR: _____

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

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

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

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

FESOP Quarterly Report

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-31356-00031
Facility: Melt Furnaces MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, and MF-9;
Insignificant Combustion Units in Plants 1, 2, 3, and 4 (excluding the emergency generator)
Parameter: Source-wide Natural Gas Usage
Limit: Not to exceed 1461.2 MMCF per twelve (12) consecutive months with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (mmcf)	Previous 11 Months (mmcf)	12 Month Total (mmcf)
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
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-30081-00031

Months: _____ to _____ Year: _____

Page 1 of 2

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Source: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) 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 SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine 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 as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI 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 parts 90 and 1048, 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.

(f) Owners and operators of facilities with internal combustion engines 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.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011]

Emission Standards for Manufacturers

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine displacement is * * *	and manufacturing dates are * * *	the engine must meet emission standards and related requirements for nonhandheld engines under * * *
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP, must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission

standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI 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 SI ICE.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59175, Oct. 8, 2008; 76 FR 37973, June 28, 2011]

§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in §60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in §60.4231(a) applicable to engines manufactured on July 1, 2008.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in §60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in §60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_x) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_x emission standard of 250 ppmvd at 15 percent oxygen (O₂), a CO emission standard 540 ppmvd at 15 percent O₂ (675 ppmvd at 15 percent O₂ for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O₂, where the date of manufacture of the engine is:

- (i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);
- (ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;
- (iii) Prior to January 1, 2009, for emergency engines;
- (iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.
- (5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.
- (g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.
- (h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37973, June 28, 2011]

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

- (a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.
- (b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.
- (c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.
- (d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.
- (e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization of Standardization 8178-4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing that the engine will meet the emission standards specified in §60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in §60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59176, Oct. 8, 2008; 76 FR 37974, June 28, 2011]

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad 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. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words "and stationary" after the word "nonroad" to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification 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. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

(1) The engines must be equipped with non-resettable hour meters.

(2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.

(3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine 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, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 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.

(ii) If you are an owner or operator of a stationary SI 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 and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. 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 year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of a stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. 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.

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011]

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(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 be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10⁻³ = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10⁻³ = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{25A}}{C_{M_i}} \quad (\text{Eq. 4})$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{i_{corr}} = RF_i \times C_{i_{meas}} \quad (\text{Eq. 5})$$

Where:

C_{i_{corr}} = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{i_{meas}} = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{P_{eq}} = 0.6098 \times C_{i_{corr}} \quad (\text{Eq. 6})$$

Where:

C_{P_{eq}} = Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of 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.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

General Provisions

§ 60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Mobile Source Provisions

§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Definitions

§ 60.4248 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 SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

- (i) 1,000 hours of operation.
- (ii) Your recommended overhaul interval.
- (iii) Your mechanical warranty for the engine.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

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.

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 carbon dioxide (CO₂).

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. 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. Stationary SI ICE used for peak shaving are not considered emergency stationary ICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

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.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

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.

Installed means the engine is placed and secured at the location where it is intended to be operated.

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

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

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

Manufacturer has the meaning given in section 216(1) of the Clean Air 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 resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

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").

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.

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.

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

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 June 12, 2006, 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.

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 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 compression ignition 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.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in 40 CFR part 63, subpart P, that tests stationary ICE.

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

Subpart means 40 CFR part 60, subpart JJJJ.

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.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in §60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011]

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
			1/1/2011	1.0	2.0	0.7	82	270
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
			7/1/2010	1.0	2.0	0.7	82	270
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
			7/1/2010	1.0	2.0	0.7	82	270
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
			1/1/2011	2.0	5.0	1.0	150	610
		7/1/2007	3.0	5.0	1.0	220	610	80
			7/1/2010	2.0	5.0	1.0	150	610
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
			7/1/2010	2.0	5.0	1.0	150	610
Emergency	25<HP<130	1/1/2009	^c 10	387	N/A	N/A	N/A	N/A
			HP≥130	2.0	4.0	1.0	160	540

^aOwners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^bOwners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

^cThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x + HC.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load:

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244	a. limit the concentration of NO _x in the stationary SI 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 or ASTM Method D6522–00(2005) ^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;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) ^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, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) 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 must be made at the same time as the measurement for NO _x concentration.
		v. Measure NO _x at the exhaust of the stationary internal combustion engine	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522–00(2005) ^a , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of	i. Select the sampling port location and the	(1) Method 1 or 1A of 40 CFR part 60, Appendix A	(a) If using a control device, the sampling

	CO in the stationary SI internal combustion engine exhaust	number of traverse points;	or ASTM Method D6522-00(2005) ^a	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;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) ^a	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) 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 must be made at the same time as the measurement for CO concentration.
		v. Measure CO at the exhaust of the stationary internal combustion engine	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00(2005) ^a , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI 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	(2) Method 3, 3A, or	(b) Measurements to

		O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	3B ^b of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) ^a	determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) 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 must be made at the same time as the measurement for VOC concentration.
		v. Measure VOC at the exhaust of the stationary internal combustion engine	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A ^{c,d} , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) Results of this test consist of the average of the three 1-hour or longer runs.

[76 FR 37975, June 28, 2011]

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, 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	Yes	

	General Provisions		
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§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 §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source	Subject of citation	Applies to	Explanation
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provisions citation		subpart	
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.

1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

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

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

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

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

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

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

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

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

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

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

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of

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

- (2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.
- (3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
- (4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.
- (5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
- (6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.
- (7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
- (b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.
- (1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.
- (2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.
- (c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

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

Emission and Operating Limitations

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

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

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

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

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP

located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

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

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

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

[75 FR 51589, Aug. 20, 2010]

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

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

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

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

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

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

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

[75 FR 51589, Aug. 20, 2010]

General Compliance Requirements

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

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

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

[75 FR 9675, Mar. 3, 2010]

Testing and Initial Compliance Requirements

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

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

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

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a

major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§ 63.6615 When must I conduct subsequent performance tests?

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

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

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

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

(c) [Reserved]

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

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

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

Where:

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

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

R = percent reduction of CO or formaldehyde emissions.

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

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

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

Where:

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

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

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 / J ($\text{dscf} / 10^6 \text{ Btu}$).

F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm^3 / J ($\text{dscf} / 10^6 \text{ Btu}$).

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

$$X_{\text{CO}_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

X_{CO_2} = CO₂ correction factor, percent.

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

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

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

Where:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
- (8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
- (9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and
- (10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.
- (f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.
- (g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.
- (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
- (2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.
- (h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.
- (i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
- (j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

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

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

- (a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

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

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

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

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

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) *Requirements for emergency stationary RICE.* (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

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

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

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

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

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

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

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

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

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

following;

- (1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.
- (2) An existing stationary RICE located at an area source of HAP emissions.
- (3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.
- (4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.
- (5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.
- (b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.
- (c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.
- (d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.
- (e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.
- (f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).
- (g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).
- (h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).
- (1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.
- (2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

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

§ 63.6650 What reports must I submit and when?

- (a) You must submit each report in Table 7 of this subpart that applies to you.
- (b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.
 - (1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.
 - (2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.
 - (3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - (4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
 - (5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

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

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

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

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

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

(1) Company name and address.

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

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

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

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

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

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

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

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

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

§ 63.6655 What records must I keep?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) An existing stationary emergency RICE.

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

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

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

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

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

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

- (a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).
- (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

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

Other Requirements and Information

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

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

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

- (a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.
- (c) The authorities that will not be delegated to State, local, or tribal agencies are:
- (1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).
 - (2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.
 - (3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.
 - (4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.
 - (5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

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

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

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

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

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

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities,

restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Subpart means 40 CFR part 63, subpart ZZZZ.

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

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

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

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

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

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

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

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

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

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

For each . . .	You must meet the following operating limitation . . .
1. 4SRB stationary RICE complying with the	a. Maintain your catalyst so that the pressure drop across

<p>requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O₂ and using NSCR.</p>	<p>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.</p>
<p>2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O₂ and not using NSCR.</p>	<p>Comply with any operating limitations approved by the Administrator.</p>

[76 FR 12867, Mar. 9, 2011]

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

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

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent	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

	O ₂ until June 15, 2007	
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂	

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

[75 FR 9680, Mar. 3, 2010]

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

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

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

<p>of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst</p>	
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¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

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

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

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

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

black start CI stationary RICE 100≤HP≤300 HP	the stationary RICE exhaust to 230 ppmvd or less at 15 percent O ₂	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ²	
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ²	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. ³	
8. Non-Emergency, non-	a. Change oil and filter every	

black start 2SLB stationary SI RICE <100 HP	4,320 hours of operation or annually, whichever comes first; ²	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. ³	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O ₂	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O ₂	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O ₂	
12. Non-emergency, non-black start landfill or digester gas-fired stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O ₂	

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

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

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

[75 FR 51593, Aug. 20, 2010]

Table 2d 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	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE $300 < \text{HP} \leq 500$	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of	

	operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of	

	operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 93 percent or more.	
9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O ₂ ; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	

	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

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

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

[75 FR 51595, Aug. 20, 2010]

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

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

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

that are operated more than 24 hours per calendar year that are not limited use stationary RICE		
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

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

[75 FR 51596, Aug. 20, 2010]

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

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

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^a (incorporated by reference, see §63.14). Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^{ab} (incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O ₂ , dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of	(1) Method 3 or 3A or 3B of 40 CFR part 60,	(a) Measurements to determine O ₂ concentration

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

			(Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005), ^a Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	(a) CO Concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour longer runs.

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

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

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

[75 FR 51597, Aug. 20, 2010]

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

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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area	a. Limit the concentration of CO, using oxidation catalyst, and using a	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and

<p>source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>CPMS</p>	<p>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.</p>
<p>3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Reduce CO emissions and not using oxidation catalyst</p>	<p>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.</p>
<p>4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Limit the concentration of CO, and not using oxidation catalyst</p>	<p>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.</p>
<p>5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and</p>	<p>a. Reduce CO emissions, and using a CEMS</p>	<p>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO</p>

<p>existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>		<p>calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.</p>
<p>6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Limit the concentration of CO, and using a CEMS</p>	<p>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and</p>
		<p>iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.</p>
<p>7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Reduce formaldehyde emissions and using NSCR</p>	<p>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</p>
		<p>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</p>
<p>8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year</p>	<p>a. Reduce formaldehyde emissions and not using NSCR</p>	<p>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to</p>

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

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

[76 FR 12867, Mar. 9, 2011]

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

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; ^a and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the

		operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located 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
		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, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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 $\geq 5,000$ located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved. ^a
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; ^a and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the	i. Conducting semiannual performance tests for formaldehyde to demonstrate

<p>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</p>	<p>stationary RICE exhaust and not using oxidation catalyst or NSCR</p>	<p>that your emissions remain at or below the formaldehyde concentration limit;³ and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</p>
		<p>iii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</p>
<p>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 landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year</p>	<p>a. Work or Management practices</p>	<p>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.</p>
<p>10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE</p>	<p>a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR</p>	<p>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde</p>

		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, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	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 and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or	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

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

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

[76 FR 12870, Mar. 9, 2011]

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

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

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

gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis		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.	

[75 FR 51603, Aug. 20, 2010]

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

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

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	

§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and	Yes	Subpart ZZZZ specifies test

	reduction of data		methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	

§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.

§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE	No	Subpart ZZZZ does not contain

	observations		opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

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

Technical Support Document (TSD) for a Significant Permit Revision to a
Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name: Ryobi Die Casting (USA), Inc.
Source Location: 800 West Mausoleum Road, Shelbyville, Indiana 46176
County: Shelby
SIC Code: 3363 (Aluminum Die Castings)
Operation Permit No.: F145-30081-00031
Operation Permit Issuance Date: August 23, 2011
Minor Permit Revision No.: 145-31356-00031
Permit Reviewer: Jack Harmon

On January 12, 2012, the Office of Air Quality (OAQ) received an application from Ryobi Die Casting (USA), Inc. related to a modification to an existing stationary aluminum die casting plant. This source melts only clean aluminum ingots and clean casting scrap, and is not primarily engaged in the metal recovery process.

Source Definition

The source definition for this source was determined in permit no. 145-15571-00031, issued on October 2, 2006, and was re-confirmed in FESOP Renewal No. 145-30081-00031, issued August 23, 2011. This aluminum die casting company consists of four (4) plants which represent four (4) physical buildings. Since these four (4) plants are located on the same property, and are owned by one (1) company, IDEM, OAQ has determined that these four (4) plants are still considered as one (1) source in this FESOP permit revision.

Existing Approvals

The source was issued FESOP Renewal No. 145-30081-00031 on August 23, 2011. There have been no revisions since that renewal.

County Attainment Status

The source is located in Shelby County.

Pollutant	Designation
SO ₂	Better than national standards
CO	Unclassifiable or attainment effective November 15, 1990
O ₃	Attainments effective October 19, 2007, for the 8-hour ozone standard ¹
PM ₁₀	Unclassifiable effective November 25, 1990.
NO ₂	Cannot be classified or better than national standards
Pb	Not designated
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard, which was revoked effective June 15, 2005.	
Unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

- (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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Shelby County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 Shelby County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**
 Shelby County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: This source uses only aluminum ingots and its own internal scrap, and is not primarily engaged in the metal recovery process. Therefore, this source is not considered a “secondary metal production plant” and is not 1 of the 28 source categories, as defined in 326 IAC 2-2(ff), in the PSD regulations. This determination was made in FESOP No. 145-30081-00031, issued August 23, 2011.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to the Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHG, as CO2e	Total HAPs	Worst Single HAP
Ten (10) Shotblasting Lines SBS-6, SBS-7, SBS-9, SBS-10, SBS-11, 03-SBS-01 through 03-SBS-04 and 03-SBS-06	76.3	76.3	76.3	-	-	-	-	-	-	-
*** Seven (7) natural gas-fired Aluminum Melting Furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-7	1.85	3.56	3.56	5.55	48.1	3.7	39.4	47,298.84	0.88	0.84 (Hexane)
One (1) Al Scrap Handling Process	16.4	16.4	16.4	-	-	-	-	-	-	-
One (1) Die Casting Process	-	-	-	2.41	1.20	16.9	-	-	-	-
Insignificant Activities										

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to the Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHG, as CO2e	Total HAPs	Worst Single HAP
***Insignificant Combustion Units [Plants (1, 2, 3), and 4]	1.08	2.13	2.13	3.23	28.0	2.15	23.5	33,804.48	0.53	0.5 (Hexane)
Other Insignificant Units	< 1.0	< 1.0	< 1.0	-	-	<1.0	-	-	-	-
Total PTE of Entire Source	96.65	99.41	99.41	11.19	77.3	< 23.72	< 62.9	81,102.32	1.41	1.34 (Hexane)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 "-" pollutant not emitted from the facility..
 ***Emissions are based on the Administrative Amendment No: 145-24767-00031 amended to FESOP Permit No.: F145-15571-000331, issued on June 26, 2007. These units use Propane fuel as a back up, therefore limited emissions are based on the limited amount of fuel usage, and are worst case scenario between burning natural gas and propane.
 ****Emission factors for Propane are updated from AP-42, Chapter 1.5-1 (AP-42, 07/2008). The emission factors for PM, PM10, VOC, NOx and CO are revised, therefore the emission limits are different based on the propane usage limit. See TSD Appendix A for limits.
 *****The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is limited to less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.
 These emissions are as reported as After Issuance of the FESOP Renewal No. 145-30081-00031, issued August 23, 2011.

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Ryobi Die Casting (USA), Inc. on January 12, 2012, relating to the proposed modification to its existing permit:

- (a) to add two furnaces similar to existing furnaces;
- (b) to remove one furnace from its operation;
- (c) to make administrative descriptive changes to better clarify its operations;
- (d) to modify the description of its six (6) existing furnaces to add existing flux usage to its permit;
- (e) to eliminate propane as a back-up fuel option;
- (f) to adjust the natural gas usage limits in its permit due to the new two furnaces, and the reconfiguration of the fuel source limits;
- (g) to change various permit conditions;
- (h) to modify a parameter for its monitoring requirements;

- (i) to add an emergency generator to its permit;
- (j) to rename some of the control devices associated with its shot blast equipment. IDEM, OAQ, also corrected the throughput on the blast machines from the previous permit. The emissions calculations now match the maximum throughput shown in the emissions unit description;
- (k) to re-evaluate the VOC emissions from the Die Casting process; and
- (l) to adjust its emission limits for the shot blast units to remain a FESOP.

The following is a list of the new emission units and pollution control devices:

- (a) One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.
- (b) One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per hour, and exhausting through stack SV#MF-9.

The following is a list of the modified emission units and pollution control devices. The change is to add flux capability to its furnace operations, and to account for the furnace melting process emissions.

- (c) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, and approved for modification in 2012, with a maximum heat input capacity of 14.4 MMBtu/hr, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 10.0 pounds per hour, and exhausting through stack SV#MF-5.
- (d) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, and approved for modification in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-6.
- (e) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 15.0 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-1S.
- (f) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 23.8 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-2M.
- (g) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, and approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 7.0 pounds per hour, and exhausting through stack SV#MF-3N.
- (h) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, and approved for

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
Insignificant Activities: Emergency Generator (Natural Gas Combustion)	0.003	0.003	0.003	0.00	0.30	0.01	0.27	11.93	5.42E-03	5.52E-02 (Formaldehyde)
Total PTE of Proposed Revision	200.42	201.24	201.24	0.09	14.62	0.80	12.30	17,303.93	2.76E-01	2.76E-01 (Formaldehyde)

This FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(g) and 326 IAC 2-8-11.1(f)(1)(E), because it involves adjustment to the existing source-wide emissions limitations to maintain the FESOP status of the source (see PTE of the Entire Source After The Issuance of the FESOP Revision Section), and because the potential to emit PM, PM10, and PM2.5 is greater than 25 tons per year.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Deleted items are shown in ~~strike through~~ and new items are **bolded**.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NOx	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Ten (10) Shotblasting Lines SBS-6, SBS-7, SBS-9, SBS-10, SBS-11, 03-SBS-01 through 03-SBS-04 and 03-SBS-06 Shot Blast Units SBS-6, SBS-7, SBS-9, SBS-10, SBS-11, 03-SBS-01, 03-SBS-02, 03-SBS-03, 03-SBS-04, 03-SBS-06 (1)	76.3 14.03	76.3 9.90	76.3 9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
*** Seven (7) natural gas-fired Aluminum Melting Furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-, MF-7	1.85	3.56	3.56	5.55	48.1	3.7	39.4	47,298.84	0.88	0.84 (Hexane)
Melt Furnace Process (MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-7, MF-8, MF-9) ⁽²⁾	82.50	82.50	82.50	0.00	0.00	0.00	0.00	0.00	8.72E	8.72E (HF)
One (1) Al Scrap Handling Process	16.4	16.4	16.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
One (1) Die Casting Process	0.00	0.00	0.00	2.41	1.20	0.00 16.86	0.00	0.00	0.00	0.00
Insignificant Activities										

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
***Insignificant Combustion Units [Plants (1, 2, 3), and 4]	1.08	2.13	2.13	3.23	28.0	2.15	23.5	33,804.48	0.53	0.5 (Hexane)
Other Insignificant Activities	≤1.00	≤1.00	≤1.00	0.00	≤1.00	1.00	negl.	0.00	0.00	0.00
Melt Furnace Combustion(3)	2.93 1.39	5.69 5.55	5.69 5.55	8.78 0.44	76.1 73.06	5.85 4.02	62.9 61.37	81102.3 88,203.6	1.44 1.38E	1.35 (Hexane) 1.32 (Hexane)
Plant 1 Combustion (3)										
Plant 2 Combustion(3)										
Plant 3 Combustion (3)										
Plant 4 Combustion (3)										
Emergency Generator	0.003	0.003	0.003	0.00	0.30	0.01	0.27	11.93	5.42E-03	4.00E-03 Formaldehyde
Total PTE of Entire Source	96.65 98.92	99.41 98.95	99.41 98.95	11.19 2.85	77.30 75.26	21.89 5.03	62.88 61.64	81102.3 88,215.6	1.44 10.1	1.35 (Hex) 8.72 (HF)
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible
 *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
(1) PM Emissions from shotblast units are controlled from the scrubbers at 98.8% efficiency.
(2) Melt process emissions are based on limited throughput of aluminum.
(3) Combustion emissions are limited from source-wide annual usage limits for natural gas, less the emergency generator.
 ***Emissions are based on the Administrative Amendment No: 145-24767-00031 amended to FESOP Permit No.: F145-15571-000331, issued on June 26, 2007. These units use Propane fuel as a back up, therefore limited emissions are based on the limited amount of fuel usage, and are worst case scenario between burning natural gas and propane.
 ****Emission factors for Propane are updated from AP 42, Chapter 1.5-1 (AP 42, 07/2008). The emission factors for PM, PM10, VOC, NO_x and CO are revised, therefore the emission limits are different based on the propane usage limit. See TSD Appendix A for limits.
 *****The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is limited to less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units, and is a clean version of the table above. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Shot Blast Units SBS-6, SBS-7, SBS-9, SBS-10, SBS-11, 03-SBS-01, 03-SBS-02, 03-SBS-03, 03-SBS-04, 03-SBS-06 ⁽¹⁾	14.03	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Melt Furnace Process (MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-8, MF-9) ⁽²⁾	82.50	82.50	82.50	0.00	0.00	0.00	0.00	0.00	8.72	8.72 (HF)
Die Casting	0.00	0.00	0.00	2.41	1.20	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	1.00	1.00	1.00	0.00	1.00	1.00	negl.	0.00	0.00	0.00
Melt Furnace Combustion ⁽³⁾	1.39	5.55	5.55	0.44	73.06	4.02	61.37	88,203.6	1.38	1.32 (Hexane)
Plant 1 Combustion ⁽³⁾										
Plant 2 Combustion ⁽³⁾										
Plant 3 Combustion ⁽³⁾										
Plant 4 Combustion ⁽³⁾										
Emergency Generator	0.003	0.003	0.003	0.00	0.30	0.01	0.27	11.93	5.42E-03	4.00E-03 Formaldehyde
Total PTE of Entire Source	98.92	98.95	98.95	2.85	75.26	5.03	61.64	88,215.6	10.1	8.72 (HF)
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

**The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(1) PM Emissions from shotblast units are controlled from the scrubbers at 98.8% efficiency.

(2) Melt process emissions are based on limited throughput of aluminum.

(3) Combustion emissions are limited from source-wide annual usage limits for natural gas, less the emergency generator.

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) PM10 and PM2.5 emissions from the shot blast units shall not exceed the emission limits listed in the table below:

Unit ID	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
SBS-6	0.27	0.27
SBS-7	0.16	0.16
SBS-9	0.14	0.14
SBS-10	0.34	0.34
SBS-11	0.14	0.14
03-SBS-01	0.48	0.48
03-SBS-02	0.11	0.11
03-SBS-03	0.16	0.16
03-SBS-04	0.20	0.20
03-SBS-06	0.26	0.26

$$PM10 = PM2.5 = 2.26 \text{ lb/hr} = 9.90 \text{ tons/yr}$$

Note: The limits shown above have been revised from the previous permit because the source elected to revise its limits in this revision in order to remain a FESOP. This is a Title I change.

The scrubbers, with at least 98.8% control efficiency, controlling the shot blast units shall operate at all times that the shot blast units are in operation.

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

- (2) The combined annual throughput of the melting furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-8, and MF-9 shall not exceed 150,000 tons of aluminum per twelve (12) consecutive month period, with compliance determined at the end of each month.

Note: This is a new limit due to this revision. The previous permit did not contain calculations for the process emissions from the melting furnaces. The source has elected to limit its throughput to the melting furnaces in order to remain a FESOP. This is a Title I change.

- (a) PM10 emissions from the melting furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-8, and MF-9 shall not exceed 1.1 lb/ton of aluminum melted.
- (b) PM2.5 emissions from the melting furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-8, and MF-9 shall not exceed 1.1 lb/ton of aluminum melted.

$$PM10 = PM2.5 = (150,000 \text{ tons/yr}) * (1.1 \text{ lb/ton}) * (1 \text{ ton}/2000 \text{ lb}) = 82.5 \text{ tons/yr}$$

- (3) Natural Gas Limit (Emergency Generator Not Included)

- (a) Natural gas usage, source-wide excluding the emergency generator, shall not exceed 1,461.2 million cubic feet (mmcf) per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) NOx emissions from the natural gas-fired combustion units, excluding the emergency generator, shall not exceed 100 lb/mmcf of natural gas combusted.

$$NOx = (1461.2 \text{ mmcf/yr}) * (100 \text{ lb/mmcf}) * (1 \text{ ton}/2000 \text{ lb}) = 73.06 \text{ tons/yr}$$

- (c) CO emission from the natural gas-fired combustion units, excluding the emergency generator, shall not exceed 84 lb/mmcf of natural gas combusted.

$$CO = (1461.2 \text{ mmcf/yr}) * (84 \text{ lb/mmcf}) * (1 \text{ ton}/2000 \text{ lb}) = 61.37 \text{ tons/yr}$$

Compliance with these limits, combined with the potential to emit PM10, PM2.5, NOx, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, NOx, and CO to less than 100 tons per 12 consecutive month period, each, any single HAP to less than ten (10) tons per 12 consecutive month period, total HAPs to less than twenty-five (25) tons per 12 consecutive month period, greenhouse gases (GHGs) to less than 100,000 tons of CO₂ equivalent emissions (CO₂e) per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(b) PSD Minor Source

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (1) PM emissions from the shot blast units shall not exceed the emission limits listed in the table below:

Unit ID	PM Emission Limit (lb/hr)
SBS-6	0.39
SBS-7	0.23
SBS-9	0.20
SBS-10	0.48
SBS-11	0.20
03-SBS-01	0.68
03-SBS-02	0.15
03-SBS-03	0.23
03-SBS-04	0.29
03-SBS-06	0.36

$$PM = 3.21 \text{ lb/hr} = 14.03 \text{ tons/yr}$$

Note: The limits shown above have been revised from the previous permit because the source elected to revise its limits in this revision in order to remain a FESOP. This is a Title I change.

The scrubbers with at least 98.8% control efficiency, controlling the shot blast units shall operate at all times that the shot blast units are running.

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

- (2) Natural gas usage, source-wide, shall not exceed 1,461.2 million cubic feet (mmcf) per twelve (12) consecutive month period, with compliance determined at the end of each month.

Note: The natural gas usage limit has been revised from the previous permit because the source has requested to remove propane as an approved fuel and use only natural gas. As a result, the limits had to be re-calculated. This is a Title I change.

- (a) CO₂ emissions from all combustion units combined, excluding the emergency generator, shall not exceed 120,000 lb/mmcf of natural gas combusted.
- (b) CH₄ emissions from all combustion units combined, excluding the emergency generator, shall not exceed 2.3 lb/mmcf of natural gas combusted.
- (c) N₂O emissions from all combustion units combined, excluding the emergency generator, shall not exceed 2.2 lb/mmcf of natural gas combusted.
- (d) Global Warming Potential (GWP) for CO₂ shall not exceed 1.
- (e) Global Warming Potential (GWP) for CH₄ shall not exceed 21.
- (f) Global Warming Potential (GWP) for N₂ shall not exceed 310.

Compliance with the limits above results in Greenhouse gas emissions, as CO₂e, from all combustion units combined, excluding the emergency generator, equivalent to 88,203.63 tons per twelve (12) consecutive month period.

Compliance with these limits, combined with the potential to emit greenhouse gases from all other emission units at this source, shall limit the source-wide total potential to emit greenhouse gases (GHGs) to less than 100,000 tons of CO₂ equivalent emissions (CO₂e) per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

- (3) Annual throughput of clean charge aluminum through the melt furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-8, and MF-9 shall not exceed 150,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

PM emissions from the melting furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1, MF-8, and MF-9 shall not exceed 1.1 lb/ton of aluminum melted.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit PM to less than 100,000 tons of PM per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Primary Aluminum Reduction Plants, 40 CFR 60, Subpart S, are not included for this proposed revision, since this source does not manufacture aluminum. Therefore, the requirements of 40 CFR 60, Subpart S do not apply.
- (b) The requirements of the New Source Performance Standard for Ferroalloy Production Facilities,

40 CFR 60, Subpart Z are not included for this proposed revision, since this source does not operate an electric submerged arc furnace. Therefore, the requirements of 40 CFR 60, Subpart Z do not apply.

- (c) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII, are not included for this proposed revision for the emergency generator, since this generator is not a compression ignition-type engine. Therefore, the requirements of 40 CFR 60, Subpart IIII do not apply.
- (d) The emergency generator is subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ, because it is a spark ignition internal combustion engine and was manufactured and constructed after June 12, 2006, and the source is an owner/operator of this engine. Testing is not required because the engine is a certified engine, as described in 40 CFR 60.4243(a).

Applicable portions of the NSPS are the following:

- (1) 40 CFR 60.4230(4)(iii),(iv)
- (2) 40 CFR 60.4233(d),(h)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4243(a)(1),(a)(2),(b)(1)
- (5) 40 CFR 60.4245(a),(d)
- (6) 40 CFR 60.4246
- (7) 40 CFR 60.4248
- (8) 40 CFR 60, Tables 2, 3

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the emergency generator except as otherwise specified in 40 CFR 60, Subpart JJJJ.

Note: This is a new requirement. This is a Title I change.

- (e) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Primary Aluminum Reduction Plants, 40 CFR 63.840, Subpart LL, are still not included in this permit because the source is not a primary aluminum reduction plant.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR 63, Subpart RRR, are still not included in this permit because it does not meet the definition of a secondary aluminum production facility. The definition of a secondary aluminum production states that for purposes of this subpart, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. This source is a die casting process that melts only clean charge, customer returns or internal scrap and does not operate a sweat furnace, thermal chip dryer or scrap dryer/delacquering kiln/decoating kiln.
- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Primary Nonferrous Metals at Area Source - Zinc, Cadmium, or Beryllium, 40 CFR 63, Subpart GGGGGG, are not included in this permit because this facility is not a zinc, cadmium, or beryllium production facility.

- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing - Area Sources, 40 CFR 63, Subpart TTTTTT, are still not included in this permit because it does not meet the definition of a brass or bronze ingot making facility, or a magnesium processing facility, or a zinc processing plant.
- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ, are still not included in this permit because die casting operations in which only clean charge is melted are excluded from this rule.
- (k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR 63, Subpart EEEEE, are still not included in this permit because this source is not an iron or steel foundry operation and is not a major source of HAPs. Therefore, the requirements of 40 CFR 63, Subpart EEEEE do not apply.
- (l) The natural gas-fired emergency generator is subject to the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because it is considered a new stationary reciprocating internal combustion engine (RICE) at an area source of Hazardous Air Pollutants (HAP). Construction of the natural gas-fired emergency generator commenced in 2010.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)

Note: There are currently no testing requirements applicable to this unit under 40 CFR 63, Subpart ZZZZ.

Pursuant to 40 CFR 63.6665, the natural gas-fired emergency generator does not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

Note: This is a new requirement. This is a Title I change.

- (m) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (n) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 1-7 (Stack Height Provisions)
Melt furnaces MF-6, MF-1S, and MF-9 are subject to the provisions of 326 IAC 1-7 because the uncontrolled potential to emit particulate matter from the exhaust stack of each of these melt furnaces is greater than 25 tons per year. Therefore, the provisions of 326 IAC 1-7 apply to these facilities.

Note: This is a change from the previous permit because the process emissions from the melt furnaces were not included in the previous permit. This is a Title I change.

- (b) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (d) 326 IAC 2-3 (Emission Offset)
This modification to an existing Emission Offset minor stationary source will not change the Emission Offset minor status, because Shelby County is attainment for all regulated pollutants. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (e) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (f) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (g) 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.
- (h) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (i) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
Due to this revision, the source is not subject to the requirements of 326 IAC 6-5, because the source has only paved roads, which do not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, the requirements of 326 IAC 6-5 do not apply.

- (j) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 (a) Due to this revision, and pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the melting furnaces shall not exceed the following pounds per hour, when operating at the process weight rates shown below. The pound per hour limitation was calculated with the equation below.

Emission Unit	Metal Throughput (tons / hour)	Flux Throughput (tons / hour)	Total Process Weight Rate (tons / hour)	PM Emissions Limit (lbs / hr)
Melt Furnace MF-5	5.0 (10,000 lb/hr)	0.005 (10 lb/hr)	5.005 (10,010 lb/hr)	12.06
Melt Furnace MF-6	7.5 (15,000 lb/hr)	0.008 (15 lb/hr)	7.508 (15,015 lb/hr)	15.82
Melt Furnace MF-1S	4.5 (9,000 lb/hr)	0.005 (9 lb/hr)	4.505 (9,009 lb/hr)	11.23
Melt Furnace MF-2M	4.5 (9,000 lb/hr)	0.005 (9 lb/hr)	4.505 (9,009 lb/hr)	11.23
Melt Furnace MF-3N	3.5 (7,000 lb/hr)	0.004 (7 lb/hr)	3.504 (7,007 lb/hr)	9.49
Melt Furnace MF-1	7.5 (15,000 lb/hr)	0.008 (15 lb/hr)	7.508 (15,015 lb/hr)	15.82
Melt Furnace MF-8	3.0 (6,000 lb/hr)	0.003 (6 lb/hr)	3.003 (6,006 lb/hr)	8.56
Melt Furnace MF-9	6.0 (12,000 lb/hr)	0.006 (12 lb/hr)	6.006 (12,012 lb/hr)	13.62

Note: This is a new limit due to this revision. The previous permit did not contain consideration for the process emissions from the melting furnaces. The melting furnaces are manufacturing processes that have the potential to emit particulate matter, and, therefore, are each subject to 326 IAC 6-3-2. This is a Title I change.

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

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

There is no control equipment on any of the eight melt furnaces.

- (k) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
 The unlimited VOC potential emissions from the new and modified units is less than twenty-five (25) tons per year. Therefore, the proposed revision is not subject to the requirements of 326 IAC 8-1-6.
- (l) There are no other 326 IAC 8 Rules that are applicable to the new and revised units.
- (m) 326 IAC 12 (New Source Performance Standards)
 See Federal Rule Applicability Section of this TSD.
- (n) 326 IAC 20 (Hazardous Air Pollutants)
 See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

- (a) The compliance determination and monitoring requirements applicable to the shot blast scrubbers for this proposed revision are as follows:

Control ID / Scrubber	Process ID	Parameter	Frequency	Range
WDC-4	SBS-6	Pressure Drop	Daily	7.5-15.0
03-WDC-03	03-SBS-06	Pressure Drop	Daily	7.5-15.0

The source has requested to change the upper limit of the normal operating range for these two scrubbers to be more consistent with its operating conditions, and to be more consistent with the other similar scrubbers serving the shot blast units. This is a Title I change.

- (b) The testing requirements applicable to the furnaces in this proposed revision are as indicated in the table below. Melt furnace process emissions are included for the first time in this revision.

<u>Emission Unit</u>	<u>Stack ID</u>	<u>Pollutant</u>	<u>Testing Frequency*</u>	<u>Repeat Frequency</u>
Melt Furnace MF-1	SV#MF-1	PM, PM10, PM2.5	Within 180 days of issuance of SPR no. 145-31356-00031	Once
Melt Furnace MF-5	SV#MF-5			
Melt Furnace MF-6	SV#MF-6			
Melt Furnace MF-1S	SV#MF-1S			
Melt Furnace MF-2M	SV#MF-2M			
Melt Furnace MF-3N	SV#MF-3N			
Melt Furnace MF-8	SV#MF-8			
Melt Furnace MF-9	SV#MF-9			

Testing of the stacks of the furnaces is necessary because the source has elected to take limits to avoid PSD and to remain a FESOP, and the emissions must be confirmed. This is a Title I change.

*The melt furnaces are identical and the melt processes are identical. Therefore, the Permittee shall perform PM, PM10, and PM2.5 testing for one of the melt furnaces, identified as MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, or MF-9, within 180 days of the issuance of this significant permit revision number 145-31356-00031. This testing shall be conducted utilizing methods as approved by the Commissioner. As long as the melt process remains the same and the melt charge material does not change, repeat testing is not necessary. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Note: IDEM, OAQ, Compliance Data Section concurs with this testing plan.

- (c) There are no testing requirements applicable to the scrubbers used for particulate control for the shot blast units.

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP No: 145-30081-00031, issued on August 23, 2011.

Proposed Changes

- (a) The following changes listed below are due to the proposed revision. (Note: due to the significant changes incorporated in this revision, some of the emissions units shown in the D-Sections of the permit have been combined, eliminated, or changed to another D-Section. For the ease of

clarification, some sections have been shown with ~~strike-through~~ of the entire old section, and the entire new section shown in **bold**.)

- (1) The source has requested to add two natural gas-fired melting furnaces to its process, similar to its existing melting furnaces, and to remove one natural gas-fired melting furnace from its permit that has been removed from the facility. These changes are reflected in the emissions calculations shown in Appendix A of this Technical Support Document. Sections A.2 and D.2 of the permit have been changed to show the description and applicable requirements due to the addition of these two furnaces.
- (2) The source has requested to add a flux operation as an addition to its melting process. Each furnace has the capability to add a flux agent as part of the melting process. These changes are reflected in the emissions calculations shown in Appendix A of this Technical Support Document. Sections A.2, D.2, and D.3 of the permit have been changed to show the flux addition in the description for each furnace and any applicable requirements due to the addition of this flux operation, and the testing requirements for the melt furnaces.
- (3) The source has requested to change its permit to reflect that its only fuel will be natural gas, to remove propane from its list of approved fuels, and to adjust its existing fuel usage limits accordingly, due to this change. All propane fuel and related equipment have been removed from the facility. These changes are reflected in the emissions calculations shown in Appendix A of this Technical Support Document. The descriptions of the combustion units have been changed in the permit in Sections A.2, and appropriate D-Sections to remove the use of propane as an approved fuel source. Permit conditions in the D-Section has been changed to reflect changes in emissions limitations and standards, compliance determination requirements, record keeping requirements, and reporting requirements that have changed due to the change in fuel type.
- (4) The source has requested to change the normal range of the pressure drop operating parameter for two of its scrubbers controlling two of the shot blast units, to be more consistent with its actual operating range and to be more consistent with the pressure drop of the other scrubbers. The permit has been changed in Condition D.1.6 to reflect this change.
- (5) The source has requested to add an emergency generator to its permit. The generator was installed in 2010 and should have been included in the previous permit. This change is reflected in the emissions calculations shown in Appendix A of this Technical Support Document. Section A.2 of the permit has been changed to show the addition of this emergency generator. Sections E.1 and E.2 have been added to the permit to reflect applicable federal requirements as the result of this change.
- (6) The source has requested to change the name of one of the scrubbers, and its corresponding stack, controlling emissions from one of the shot blast units, and to adjust its emission limits for its shot blast units. Additionally, the source has requested to replace all references to the term "Dust Collectors" in the description and conditions associated with the shot blast units with the term "Scrubbers". There are no dust collectors controlling emissions from the shot blast units, but, rather, scrubbers that control emissions. Section A.2, Section D.1, and corresponding D.1 conditions have been changed as the result of this condition.
- (7) The source has requested to change its emissions limits source-wide for PM to be less than 250 tons per year. The source is not one of the twenty-eight source categories listed in 326 IAC 2-2, and, therefore PM is not required to be limited to less than 100 tons per year. Due to the many changes associated with this revision, the emissions calculations have been changed in Appendix A of this Technical Support Document, and

new emissions limitations have been established. Particulate Matter (PM) will be limited to less than 250 tons per year, since the source wishes to remain a minor source, pursuant to 326 IAC 2-2.

- (8) The source has requested to remove Section D.3 from the permit that requires particulate emissions limitations on the scrap handling process. The source melts only clean charge and internally-generated scrap from its die casting process, and, as such, its melt materials are clean and free of foreign materials such as sand, oil, or dust. Incoming raw materials are palletized and organized. In such cases, IDEM has determined that particulate emissions from such an operation are negligible, and, therefore, there are no requirements for this scrap handling operation, as long as the source continues to use clean charge and internally-generated scrap. Therefore, the requirements for the scrap handling operation have been removed from Conditions D.3.1 and D.3.2 of the permit.
- (9) The source has requested to correct a typographical error contained in Condition D.2.1 in the reference to rule cites in that Condition. The permit has been changed accordingly.

Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

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

This aluminum die casting company consists of four (4) plants which represent four physical buildings. Since these four (4) plants are located on the same property and under common control of the same entity, they will be considered one (1) source in this FESOP.

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

- (a) Ten (10) shotblasting lines, constructed after 1986, consisting of the following:
 - (1) ---
 - (2) One (1) shotblasting line, identified as SBS-7, with maximum process rate of 1900 pounds of parts per hour, controlled by scrubber WDC-45, and exhausting through stack SV# WDC-45.
 -
 - (7) One (1) shotblasting line, identified as SBS-11 with maximum process rate of 1,640 pounds of parts per hour, controlled by scrubber WDC-45, and exhausting through stack SV# WDC-45.
- (b) ~~Seven~~**Eight (78)** natural gas-fired aluminum melting furnaces, ~~using propane as back-up fuel,~~ consisting of the following:
 - (1) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, **approved for modification in 2012**, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, **and with a maximum flux usage of 10.0 pounds per hour**, with a maximum heat input capacity of 14.4 MMBtu/hr, and exhausting through stack SV# MF-5.
 - (2) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, **and approved for modification in 2012**, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, **and with a maximum flux usage of 15.0 pounds per hour**, with a maximum heat capacity of 19.3 MMBtu/hr, and exhausting through stack SV# MF-6.

- (3) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, **and approved for modification in 2012**, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, **and with a maximum flux usage of 9.0 pounds per hour**, with a maximum heat input capacity of 15.0 MMBtu/hr, and exhausting through stack SV# MF-1S.
 - (4) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, **and approved for modification in 2012**, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, **and with a maximum flux usage of 9.0 pounds per hour**, with a maximum heat input capacity of 23.8 MMBtu/hr, and exhausting through stack SV# MF-2M.
 - (5) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, **and approved for modification in 2012**, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, **and with a maximum flux usage of 7.0 pounds per hour**, with a maximum heat capacity of 13.4 MMBtu/hr, and exhausting through stack SV# MF-3N.
 - (6) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, **and approved for modification in 2012**, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, **and with a maximum flux usage of 15.0 pounds per hour**, with a maximum heat input capacity of 18 MMBtu/hr, and exhausting through stack SV# MF-1.
 - ~~(7) One (1) aluminum melting furnace, identified as MF-7, approved for construction in 2007, with a maximum throughput rate of 3,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat capacity of 3.074 MMBtu/hr, and exhausting through stack SV# MF-7.~~
 - (7) **One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.**
 - (8) **One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per hour, and exhausting through stack SV#MF-9.**
- (c) One (1) aluminum scrap handling process, with a maximum throughput rate of 12,500 pounds of trimmed aluminum parts per hour. **This process has negligible emissions.**
 - (d) One (1) aluminum die casting process, constructed in 1986, with a maximum throughput rate of 27.5 tons of parts per hour. **This closed process has no particulate emissions.**

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

This stationary source also includes the following insignificant activities:

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

- (1) One hundred and four (104) natural gas-fired combustion units in Plant 1, with a total heat capacity of 104.36 MMBtu/hr, ~~using propane as back-up fuel~~, including the following:

- (2) Fourteen (14) natural gas-fired combustion units in Plant 2, with a total heat capacity of 11.12 MMBtu/hr, ~~using propane as back-up fuel~~, including the following:

- (4) Seven (7) natural gas-fired combustion units in Plant 4, with a total heat capacity of 1.5 MMBtu/hr, ~~using propane as back-up fuel~~, including the following:

- (A) Five (5) unit heaters, each with a maximum heat input of 0.216 MMBtu/hr.
- (B) One (1) door heater, with a maximum heat input of 0.39 MMBtu/hr.
- (C) One (1) AC/heater, with a maximum heat input of 0.031 MMBtu/hr.

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- (o) One (1) natural gas-fired emergency generator, considered a spark ignition internal combustion engine, manufactured after 2006, constructed in 2010, with a maximum heat input capacity of 0.29 MMBtu/hr, using no controls, and exhausting inside the building.**

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.

Under 40 CFR 63, Subpart ZZZZ, this is considered an affected source.

SECTION D.1 FACILITY OPERATION CONDITIONS

- a) Ten (10) shotblasting lines, constructed after 1986, consisting of the following:
- (1) ---
- (2) One (1) shotblasting line, identified as SBS-7, with maximum process rate of 1900 pounds of parts per hour, controlled by scrubber WDC-45, and exhausting through stack SV# WDC-45.
-
- (7) One (1) shotblasting line, identified as SBS-11 with maximum process rate of 1,640 pounds of parts per hour, controlled by scrubber WDC-45, and exhausting through stack SV# WDC-45.

D.1.1 PM, PM10 and PM2.5 Emissions [326 IAC 2-2] [326 IAC 2-8-4]

- (a) Pursuant to 326 IAC 2-8, the PM10 and PM2.5 emissions from the shotblasting lines

shall not exceed the emission limits listed in the table below:

Unit ID	PM10 Emission Limit (lbs/hr)	PM2.5 Emission Limit (lbs/hr)
SBS-6	1.92 0.27	1.92 0.27
SBS-7	1.92 0.16	1.92 0.16
SBS-9	1.92 0.14	1.92 0.14
SBS-10	1.38 0.34	1.38 0.34
SBS-11	1.92 0.14	1.92 0.14
03-SBS-01	1.38 0.48	1.38 0.48
03-SBS-02	1.92 0.11	1.92 0.11
03-SBS-03	1.92 0.16	1.92 0.16
03-SBS-04	1.92 0.20	1.92 0.20
03-SBS-06	1.22 0.26	1.22 0.26

- (b) In order to render 326 IAC 2-2 not applicable, the PM emissions from the shotblasting lines shall not exceed the emission limits listed in the table below:

Unit ID	PM Emission Limit (lbs/hr)
SBS-6	1.92 0.39
SBS-7	1.92 0.23
SBS-9	1.92 0.20
SBS-10	1.38 0.48
SBS-11	1.92 0.20
03-SBS-01	1.38 0.68
03-SBS-02	1.92 0.15
03-SBS-03	1.92 0.23
03-SBS-04	1.92 0.29
03-SBS-06	1.22 0.36

D.1.4 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, each of the following shotblasting lines shall be controlled by the associated scrubber, as listed in the table below, when these units are in operation:

Unit ID	Scrubber ID
SBS-6	WDC-4
SBS-7	WDC-45
SBS-11	
SBS-9	WDC-2
SBS-10	
03-SBS-01	03-WDC-01
03-SBS-04	
03-SBS-02	03-WDC-02
03-SBS-03	
03-SBS-06	03-WDC-03

D.1.5 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM, PM10, and PM2.5 testing for one of the shot blast units identified as SBS-6, SBS-7, SBS-9,

SBS-10, SBS-11, 03-SBS-01, 03-SBS-02, 03-SBS-03, 03-SBS-04, or 03-SBS-06, within 180 days of the issuance of this significant permit revision number 145-31356-00031. This testing shall be conducted utilizing methods as approved by the Commissioner. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.56 Visible Emissions Notations

- (a) Daily visible emission notations of the scrubber stack exhausts (stacks SV# WDC-45, WDC-2, WDC-4, 03-WDC-01, 03-WDC-02, and 03-WDC-03) shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.1.67 Parametric Monitoring

The Permittee shall record the pressure drop across each of the scrubbers used to control emissions from shotblasting lines at least once per day when the associated shotblasting lines are in operation. The pressure drop range and the minimum flow rate of the scrubber fluid for each scrubber are listed in the table below. When for any one reading, the pressure drop across the ~~dust collector~~ **scrubber** is outside the normal range, established during the latest stack test, the Permittee shall take reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Scrubber ID	Process ID	Pressure Drop ranges (inches of water)	Minimum Flow Rate (gallons/min)
WDC-4	SBS-6	7.5- 10.5 15.0	90
WDC-45	SBS-7 SBS-11	8-15	150
WDC-2	SBS-9 SBS-10	8-15	150
03-WDC-01	03-SBS-01 03-SBS-04	8-15	150
03-WDC-02	03-SBS-02 03-SBS-03	8-15	150
03-WDC-03	03-SBS-06	7.5- <u>10.5</u> 15.0	90

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

D.1.78 Scrubber Detection

D.1.89 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.56, the Permittee shall maintain daily records of the visible emissions notations of the ~~dust collectors~~ **scrubber** stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (i.e. the process did not operate that day).

- (b) To document the compliance status with Condition D.1.67, the Permittee shall maintain the daily records of the pressure drop across the ~~dust collectors~~ **scrubbers** controlling the shot blasters. 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).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

- (b) ~~Seven (7) natural gas-fired aluminum melting furnaces, using propane as back-up fuel, consisting of the following:~~
- (1) ~~One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat input capacity of 14.4 MMBtu/hr, and exhausting through stack SV# MF-5.~~
 - (2) ~~One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat capacity of 19.3 MMBtu/hr, and exhausting through stack SV# MF-6.~~
 - (3) ~~One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat input capacity of 15.0 MMBtu/hr, and exhausting through stack SV# MF-1S.~~
 - (4) ~~One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat input capacity of 23.8 MMBtu/hr, and exhausting through stack SV# MF-2M.~~
 - (5) ~~One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat capacity of 13.4 MMBtu/hr, and exhausting through stack SV# MF-3N.~~
 - (6) ~~One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat input capacity of 18 MMBtu/hr, and exhausting through stack SV# MF-1.~~
 - (7) ~~One (1) aluminum melting furnace, identified as MF-7, approved for construction in 2007, with a maximum throughput rate of 3,000 pounds of aluminum ingots and internally generated aluminum scrap per hour, with a maximum heat capacity of 3.074 MMBtu/hr, and exhausting through stack SV# MF-7.~~

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 FESOP Limits [326 IAC 2-8-4]

~~Pursuant to 326 IAC 2-8-4 (FESOP), the amount of propane and propane equivalents used in all the melting furnaces (MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, and MF-7) shall not exceed 7,400 kilogallons per twelve (12) consecutive month period with compliance determined at the end of each month and:~~

- ~~(a) NOx emissions shall not exceed 13 lbs per kilogallon.~~
- ~~(b) CO emissions shall not exceed 7.5 lbs per kilogallon.~~
- ~~(c) CO2e emission from these melting furnaces shall not exceed 47,298 tons per 12 consecutive month period with compliance determined at the end of the month.~~

~~For the purpose of determining compliance, every million cubic feet (MMCF) of natural gas used shall be equivalent to 11.2 kilogallons of propane.~~

~~Compliance with these limits, combined with the potential to emit NOx and CO emissions from all other existing units at this source, shall limit the source-wide total potential to emit of NOx and CO to less than 100 tons per 12 consecutive month period, each and shall render 327 IAC 2-7 (Part 70 Program), not applicable.~~

~~Compliance with these limits, combined with the limited potential to emit CO2e emissions from all other existing units at this source, shall limit the source-wide total potential to emit of CO2e to less than 100,000 tons per 12 consecutive month period, and shall render 327 IAC 2-7 (Part 70 Program) and 326 IAC 2-2, not applicable.~~

D.2.2 Material Usage [40 CFR 63, Subpart RRR]

~~The Permittee shall only melt clean aluminum ingots, or internal scrap in the aluminum foundry as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.~~

Compliance Determination Requirements

D.2.3 CO2e Compliance [326 IAC 2-8-4]

~~In order to comply with Condition D.2.1, the Permittee shall determine the CO2e emissions in accordance to the following formulas:~~

~~CO2 Equivalent (CO2e) Emission Calculations~~

$$\text{CO}_2 = \frac{[G(X_G) + P(X_P)]}{2,000}$$

$$\text{CH}_4 = \frac{[G(X_G) + P(X_P)]}{2,000}$$

$$\text{N}_2\text{O} = \frac{[G(X_G) + P(X_P)]}{2,000}$$

$$\text{CO}_2\text{e} = \sum[(\text{CO}_2 \times \text{CO}_2\text{-GWP}) + (\text{CH}_4 \times \text{CH}_4\text{-GWP}) + (\text{N}_2\text{O} \times \text{N}_2\text{O-GWP})]$$

~~Where:~~

~~CO₂ = tons of CO₂ emissions for previous 12 consecutive month period;~~

~~CH₄ = tons of CH₄ emissions for previous 12 consecutive month period;~~

~~N₂O = tons of N₂O emissions for previous 12 consecutive month period;~~

~~CO₂e = tons of CO₂e equivalent emissions for previous 12 consecutive month period;~~

~~G = million cubic feet of natural gas used in previous 12 months;
P = gallons of Propane used in previous 12 months;~~

~~*Emission Factors - CO₂:*~~

~~X_G = 120,000 pounds per million cubic feet of natural gas;~~

~~X_P = 12,500 x 10⁻³ pounds per gallon of Propane;~~

~~*Emission Factors - CH₄:*~~

~~X_G = 2.3 pounds per million cubic feet of natural gas;~~

~~X_P = 0.0002 pounds per gallon of Propane;~~

~~*Emission Factors - N₂O:*~~

~~X_G = 2.20 pounds per million cubic feet of natural gas;~~

~~X_P = 0.0009 pounds per gallon of Propane;~~

~~*Greenhouse Warming Potentials (GWP)*~~

~~Carbon dioxide (CO₂) = 1~~

~~Methane (CH₄) = 21~~

~~Nitrous oxide (N₂O) = 310~~

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

~~D.2.4 Record Keeping Requirements~~

~~(a) To document the compliance status with the Condition D.2.1, the Permittee shall maintain monthly records of the total natural gas and propane usages for the melting furnaces.~~

~~(b) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.~~

~~D.2.5 Reporting Requirements~~

~~A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no 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.~~

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

(b) Eight (8) natural gas-fired aluminum melting furnaces, consisting of the following:

(1) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, and approved for modification in 2012, with a maximum heat input capacity of 14.4 MMBtu/hr, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 10.0 pounds per hour, and exhausting through stack SV#MF-5.

(2) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, and approved for modification in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-6.

- (3) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 15.0 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-1S.
- (4) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 23.8 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-2M.
- (5) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, and approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 7.0 pounds per hour, and exhausting through stack SV#MF-3N.
- (6) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, and approved for construction in 2012, with a maximum heat input capacity of 18.0 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-1.
- (7) One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.
- (8) One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per hour, and exhausting through stack SV#MF-9.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 PM, PM10, PM2.5 Emissions [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8 (FESOP), the annual throughput for melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 150,000 tons of aluminum per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM10 emissions from the melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 1.1 pounds per ton of aluminum charged.
- (b) PM2.5 emissions from the melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 1.1 pounds per ton of aluminum charged.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 emissions from all other existing units at this source, shall limit the source-wide

total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each and shall render 326 IAC 2-7 (Part 70 Program), not applicable.

- (c) In order to render 326 IAC 2-2 not applicable, the PM emissions from the melt furnaces MF-1, MF-1S, MF-2M, MF-3N, MF-5, MF-6, MF-8, and MF-9 shall not exceed 1.1 pounds per ton of aluminum charged.

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

D.2.2 Particulate Emissions Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the melting furnaces shall not exceed the following pounds per hour, when operating at the process weight rates shown below. The pound per hour limitation was calculated with the equation below.

Emission Unit	Metal Throughput (tons/hour)	Flux Throughput (tons/hour)	Total Process Weight Rate (tons/hour)	PM Emissions Limit (lbs/hr)
Melt Furnace MF-5	5.0	0.005	5.005	12.06
Melt Furnace MF-6	7.5	0.008	7.508	15.82
Melt Furnace MF-1S	4.5	0.005	4.505	11.23
Melt Furnace MF-2M	4.5	0.005	4.505	11.23
Melt Furnace MF-3N	3.5	0.004	3.504	9.49
Melt Furnace MF-1	7.5	0.008	7.508	15.82
Melt Furnace MF-8	3.0	0.003	3.003	8.56
Melt Furnace MF-9	6.0	0.006	6.006	13.62

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

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

D.2.3 Material Usage [40 CFR 63, Subpart RRR]

The Permittee shall melt only clean charge aluminum ingots, or internally-generated clean scrap as defined in 40 CFR 63, Subpart RRR, in the melt furnaces at all times. Compliance with this condition shall render 40 CFR 63, Subpart RRR not applicable.

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

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

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]

In order to demonstrate the compliance status with Conditions D.2.1 and D.2.2, the Permittee shall perform PM, PM10, and PM2.5 testing for one of the melt furnaces, identified as MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, or MF-9, within 180 days of the issuance of this significant permit revision number 145-31356-00031. This testing shall be conducted utilizing methods as approved by the Commissioner. As long as the melt process does not change, and as long as the melt raw materials do not change, repeat

testing is not required. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.2.6 Visible Emissions Notations

- (a) **Daily visible emission notations of each melt furnace stack exhausts (stacks SV# MF-1, SV#MF-5, SV#MF-6, SV#MF-1S, SV#MF-2M, SV#MF-3N, SV#MF-8, and SV#MF-9) shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.**
- (b) **For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (c) **In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (d) **A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (e) **If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.**

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

D.2.7 Record Keeping Requirements

- (a) **In order to document the compliance status with Condition D.2.1(a), the Permittee shall maintain monthly records of the aluminum melted used in each of the melt furnaces. The Permittee shall include in its monthly record when there is no entry and the reason for the lack of an entry (i.e. the melt furnace did not operate that day).**
- (b) **In order to document the compliance status with Condition D.2.6, the Permittee shall maintain monthly records of the visible emissions notations. The Permittee shall include in its monthly record when there is no visible emissions notation and the reason for the lack of a record (i.e. the melt furnace did not operate that day).**
- (c) **Section C – General Record Keeping Requirements contains the Permittee's obligation required by this condition.**

D.2.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1(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.

SECTION D.3 – FACILITY OPERATION CONDITIONS

~~Facility Description [326 IAC 2-8-4(10)]~~

~~(c) One (1) aluminum scrap handling process, with a maximum throughput rate of 12,500 pounds of trimmed aluminum parts per hour.~~

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

~~Emission Limitations and Standards [326 IAC 2-8-4(1)]~~

~~D.3.1 PM, PM2.5 and PM10 Emissions [326 IAC 2-2] [326 IAC 2-8-4]~~

~~(a) Pursuant to 326 IAC 2-8-4 (FESOP), the PM10 emissions from the aluminum scrap handling process shall not exceed 3.75 lbs/hr.~~

~~(b) Pursuant to 326 IAC 2-8-4 (FESOP), the PM2.5 emissions from the aluminum scrap handling process shall not exceed 3.75 lbs/hr.~~

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

~~(c) In order to render 326 IAC 2-2 not applicable, the PM emissions from the aluminum scrap handling process shall not exceed 3.75 lbs/hr.~~

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

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

~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions from the aluminum scrap handling process shall not exceed 14.0 pounds per hour when operating at a process weight rate of 12,500 pounds per hour.~~

~~The pounds per hour limitation was calculated with the following equation:~~

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

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

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]

(b) Eight (8) natural gas-fired aluminum melting furnaces, consisting of the following:

(1) One (1) aluminum melting furnace, identified as MF-5, constructed in 1989, and approved for modification in 2012, with a maximum heat input capacity of 14.4 MMBtu/hr, with a maximum throughput rate of 10,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage

of 10.0 pounds per hour, and exhausting through stack SV#MF-5.

- (2) One (1) aluminum melting furnace, identified as MF-6, constructed in 1994, and approved for modification in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-6.
- (3) One (1) aluminum melting furnace, identified as MF-1S, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 15.0 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-1S.
- (4) One (1) aluminum melting furnace, identified as MF-2M, constructed in 1998, and approved for construction in 2012, with a maximum heat input capacity of 23.8 MMBtu/hr, with a maximum throughput rate of 9,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 9.0 pounds per hour, and exhausting through stack SV#MF-2M.
- (5) One (1) aluminum melting furnace, identified as MF-3N, constructed in 2000, and approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 7,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 7.0 pounds per hour, and exhausting through stack SV#MF-3N.
- (6) One (1) aluminum melting furnace, identified as MF-1, constructed in 2005, and approved for construction in 2012, with a maximum heat input capacity of 18.0 MMBtu/hr, with a maximum throughput rate of 15,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 15.0 pounds per hour, and exhausting through stack SV#MF-1.
- (7) One (1) aluminum melting furnace, identified as MF-8, approved for construction in 2012, with a maximum heat input capacity of 13.4 MMBtu/hr, with a maximum throughput rate of 6,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 6.0 pounds per hour, and exhausting through stack SV#MF-8.
- (8) One (1) aluminum melting furnace, identified as MF-9, approved for construction in 2012, with a maximum heat input capacity of 19.3 MMBtu/hr, with a maximum throughput rate of 12,000 pounds of aluminum ingots and internally-generated aluminum scrap per hour, and with a maximum flux usage of 12.0 pounds per hour, and exhausting through stack SV#MF-9.

Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) One hundred and four (104) natural gas-fired combustion units in Plant 1, with a total heat capacity of 104.36 MMBtu/hr, including the following:
 - (A) Three (3) pre-heat stations, each with a maximum heat input of 0.008 MMBtu/hr.

- (B) One (1) make-up air unit, with a maximum heat input of 1.02 MMBtu/hr.**
- (C) Three (3) make-up air units, each with a maximum heat input of 1.972 MMBtu/hr.**
- (D) One (1) make-up air unit, with a maximum heat input of 2.066 MMBtu/hr.**
- (E) Four (4) make-up air units, each with a maximum heat input of 2.137 MMBtu/hr.**
- (F) Sixteen (16) make-up air units, each with a maximum heat input of 2.1875 MMBtu/hr.**
- (G) Two (2) make-up air units, each with a maximum heat input of 2.324 MMBtu/hr.**
- (H) One (1) make-up air unit, with a maximum heat input of 2.5 MMBtu/hr.**
- (I) Two (2) make-up air units, each with a maximum heat input of 3.052 MMBtu/hr.**
- (J) Six (6) make-up air units, each with a maximum heat input of 3.327 MMBtu/hr.**
- (K) One (1) make-up air unit, with a maximum heat input of 4.1 MMBtu/hr.**
- (L) One (1) make-up air unit, with a maximum heat input of 5 MMBtu/hr.**
- (M) Fifty-one (51) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.**
- (N) Ten (10) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.**
- (O) One (1) office heater, with a maximum heat input of 0.215 MMBtu/hr.**
- (P) One (1) office heater, with a maximum heat input of 0.16 MMBtu/hr.**
- (2) Fourteen (14) natural gas-fired combustion units in Plant 2, with a total heat capacity of 11.12 MMBtu/hr, including the following:**
 - (A) One (1) make-up air unit, with a maximum heat input of 0.75 MMBtu/hr.**
 - (B) One (1) air curtain, with a maximum heat input of 3.5 MMBtu/hr.**
 - (C) One (1) air curtain, with a maximum heat input of 3.0 MMBtu/hr.**
 - (D) One (1) air curtain, with a maximum heat input of 2.203 MMBtu/hr.**
 - (E) Nine (9) space unit heaters, each with a maximum heat input of 0.2 MMBtu/hr.**
 - (F) One (1) office heater, with a maximum heater input of 0.0514 MMBtu/hr.**
- (3) Eighty-eight (88) natural gas-fired combustion units in Plant 3 (with no back-up**

fuel), with a total heat capacity of 117.12 MMBtu/hr, including the following:

- (A) Two (2) pre-heat stations, each with a maximum heat input of 2.0 MMBtu/hr.
 - (B) Six (6) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
 - (C) Eight (8) door heaters, each with a maximum heat input of 0.814 MMBtu/hr.
 - (D) One (1) make-up air unit, with a maximum heat input of 0.751 MMBtu/hr.
 - (E) Two (2) make-up air units, each with a maximum heat input of 1.503 MMBtu/hr.
 - (F) Six (6) make-up air units, each with a maximum heat input of 1.784 MMBtu/hr.
 - (G) One (1) make-up air unit, with a maximum heat input of 1.972 MMBtu/hr.
 - (H) Three (3) make-up air units, each with a maximum heat input of 2.536 MMBtu/hr.
 - (I) Four (4) make-up air units, each with a maximum heat input of 3.287 MMBtu/hr.
 - (J) Sixteen (16) make-up air units, each with a maximum heat input of 3.945 MMBtu/hr.
 - (K) Thirty-nine (39) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
- (4) Seven (7) natural gas-fired combustion units in Plant 4, with a total heat capacity of 1.5 MMBtu/hr, including the following:
- (A) Five (5) unit heaters, each with a maximum heat input of 0.216 MMBtu/hr.
 - (B) One (1) door heater, with a maximum heat input of 0.39 MMBtu/hr.
 - (C) One (1) AC/heater, with a maximum heat input of 0.031 MMBtu/hr.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4 (FESOP), and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the amount of natural gas used in all the melting furnaces MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, and MF-9, and all insignificant combustion units at Plants 1, 2, 3, and 4, excluding the emergency generator, shall not exceed 1461.2 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month and:
- (1) NO_x emissions shall not exceed 100 lb per MMCF.
 - (2) CO emissions shall not exceed 84 lb per MMCF.

Compliance with these limits, combined with the potential to emit NOx and CO emissions from all other existing units at this source, shall limit the source-wide total potential to emit of NOx and CO to less than 100 tons per 12 consecutive month period, each and shall render 327 IAC 2-7 (Part 70 Program), not applicable.

- (3) CO2 emissions from these combustion units shall not exceed 120,000 lb/mmcf.
- (4) CH4 emissions from these combustion units shall not exceed 2.3 lb/mmcf.
- (5) N2O emissions from these combustion units shall not exceed 2.2 lb/mmcf.
- (6) Global Warming Potential (GWP) for CO2 shall not exceed 1.
- (7) Global Warming Potential (GWP) for CH4 shall not exceed 21.
- (8) Global Warming Potential (GWP) for N2O shall not exceed 310.

Compliance with these limits, combined with the limited potential to emit CO2e emissions from all other existing units at this source, shall limit the source-wide total potential to emit of CO2e to less than 100,000 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2, not applicable.

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

D.3.2 Record Keeping Requirements

- (a) To document the compliance status with the Condition D.3.1, the Permittee shall maintain monthly records of the total natural gas usage of the entire source, except the emergency generator.
- (b) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

D.3.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no 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.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour:
 - (1) One hundred and four (104) natural gas-fired combustion units in Plant 1, with a total heat capacity of 104.36 MMBtu/hr, using propane as back-up fuel, including the following:
 - (A) Three (3) pre-heat stations, each with a maximum heat input of 0.008 MMBtu/hr.
 - (B) One (1) make-up air unit, with a maximum heat input of 1.02 MMBtu/hr.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- (C) — Three (3) make-up air units, each with a maximum heat input of 1.972 MMBtu/hr.
- (D) — One (1) make-up air unit, with a maximum heat input of 2.066 MMBtu/hr.
- (E) — Four (4) make-up air units, each with a maximum heat input of 2.137 MMBtu/hr.
- (F) — Sixteen (16) make-up air units, each with a maximum heat input of 2.1875 MMBtu/hr.
- (G) — Two (2) make-up air units, each with a maximum heat input of 2.324 MMBtu/hr.
- (H) — One (1) make-up air unit, with a maximum heat input of 2.5 MMBtu/hr.
- (I) — Two (2) make-up air units, each with a maximum heat input of 3.052 MMBtu/hr.
- (J) — Six (6) make-up air units, each with a maximum heat input of 3.327 MMBtu/hr.
- (K) — One (1) make-up air unit, with a maximum heat input of 4.1 MMBtu/hr.
- (L) — One (1) make-up air unit, with a maximum heat input of 5 MMBtu/hr.
- (M) — Fifty-one (51) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
- (N) — Ten (10) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
- (O) — One (1) office heater, with a maximum heat input of 0.215 MMBtu/hr.
- (P) — One (1) office heater, with a maximum heat input of 0.16 MMBtu/hr.
- (2) — Fourteen (14) natural gas-fired combustion units in Plant 2, with a total heat capacity of 11.12 MMBtu/hr, using propane as back-up fuel, including the following:
 - (A) — One (1) make-up air unit, with a maximum heat input of 0.75 MMBtu/hr.
 - (B) — One (1) air curtain, with a maximum heat input of 3.5 MMBtu/hr.
 - (C) — One (1) air curtain, with a maximum heat input of 3.0 MMBtu/hr.
 - (D) — One (1) air curtain, with a maximum heat input of 2.203 MMBtu/hr.
 - (E) — Nine (9) space unit heaters, each with a maximum heat input of 0.2 MMBtu/hr.
 - (F) — One (1) office heater, with a maximum heater input of 0.0514 MMBtu/hr.
- (3) — Eighty-eight (88) natural gas-fired combustion units in Plant 3 (with no back-up fuel), with a total heat capacity of 117.12 MMBtu/hr, including the following:
 - (A) — Two (2) pre-heat stations, each with a maximum heat input of 2.0 MMBtu/hr.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- (B) Six (6) door heaters, each with a maximum heat input of 0.4 MMBtu/hr.
- (C) Eight (8) door heaters, each with a maximum heat input of 0.814 MMBtu/hr.
- (D) One (1) make-up air unit, with a maximum heat input of 0.751 MMBtu/hr.
- (E) Two (2) make-up air units, each with a maximum heat input of 1.503 MMBtu/hr.
- (F) Six (6) make-up air units, each with a maximum heat input of 1.784 MMBtu/hr.
- (G) One (1) make-up air unit, with a maximum heat input of 1.972 MMBtu/hr.
- (H) Three (3) make-up air units, each with a maximum heat input of 2.536 MMBtu/hr.
- (I) Four (4) make-up air units, each with a maximum heat input of 3.287 MMBtu/hr.
- (J) Sixteen (16) make-up air units, each with a maximum heat input of 3.945 MMBtu/hr.
- (K) Thirty-nine (39) space unit heaters, each with a maximum heat input of 0.1 MMBtu/hr.
- (4) Seven (7) natural gas fired combustion units in Plant 4, with a total heat capacity of 1.5 MMBtu/hr, using propane as back-up fuel, including the following:
 - (A) Five (5) unit heaters, each with a maximum heat input of 0.216 MMBtu/hr.
 - (B) One (1) door heater, with a maximum heat input of 0.39 MMBtu/hr.
 - (C) One (1) AC/heater, with a maximum heat input of 0.031 MMBtu/hr.

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

~~Emission Limitations and Standards [326 IAC 2-8-4(1)]~~

~~D.5.1 FESOP Limits [326 IAC 2-8-4]~~

~~(a) Pursuant to 326 IAC 2-8-4 (FESOP), the amount of natural gas and natural gas equivalents used in all the insignificant combustion units at Plants 1, 2, 3, and 4 shall not exceed 560 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month and:~~

- ~~1. NO_x emissions shall not exceed 100 lb per MMCF.~~
- ~~2. CO emissions shall not exceed 84 lb per MMCF.~~
- ~~3. CO_{2e} emission from these combustion units in Plants 1, 2, 3, and 4 shall not exceed 33,804 tons per 12 consecutive month period with compliance determined at the end of the month.~~

~~For the purpose of determining the compliance, every 1,000 gallons of propane used shall be equivalent to 7.69 MMCF of natural gas.~~

~~Compliance with these limits, combined with the potential to emit NOx and CO emissions from all other existing units at this source, shall limit the source-wide total potential to emit of NOx and CO to less than 100 tons per 12 consecutive month period, each and shall render 327 IAC 2-7 (Part 70 Program), not applicable.~~

~~Compliance with these limits, combined with the limited potential to emit CO2e emissions from all other existing units at this source, shall limit the source-wide total potential to emit of CO2e to less than 100,000 tons per 12 consecutive month period, and shall render 327 IAC 2-7 (Part 70 Program) and 326 IAC 2-2, not applicable.~~

Compliance Determination Requirement

D.5.2 CO2e Compliance [326 IAC 2-8-4]

In order to comply with Condition D.5.1, the Permittee shall determine the CO2e emission in accordance with the following formulas:

CO2 Equivalent (CO2e) Emission Calculations

$$\text{CO}_2 = \frac{[G(X_G) + P(X_P)]}{2,000}$$

$$\text{CH}_4 = \frac{[G(X_G) + P(X_P)]}{2,000}$$

$$\text{N}_2\text{O} = \frac{[G(X_G) + P(X_P)]}{2,000}$$

$$\text{CO}_2\text{e} = \sum[(\text{CO}_2 \times \text{CO}_2\text{-GWP}) + (\text{CH}_4 \times \text{CH}_4\text{-GWP}) + (\text{N}_2\text{O} \times \text{N}_2\text{O-GWP})]$$

Where:

CO₂ = tons of CO₂ emissions for previous 12 consecutive month period;

CH₄ = tons of CH₄ emissions for previous 12 consecutive month period;

N₂O = tons of N₂O emissions for previous 12 consecutive month period;

CO₂e = tons of CO₂e equivalent emissions for previous 12 consecutive month period;

G = million cubic feet of natural gas used in previous 12 months;

P = gallons of Propane used in previous 12 months;

Emission Factors - CO2:

X_G = 120,000 pounds per million cubic feet of natural gas;

X_P = 12,500 × 10⁻³ pounds per gallon of Propane;

Emission Factors - CH4:

X_G = 2.3 pounds per million cubic feet of natural gas;

X_P = 0.0002 pounds per gallon of Propane;

Emission Factors - N2O:

X_G = 2.20 pounds per million cubic feet of natural gas;

X_P = 0.0009 pounds per gallon of Propane;

Greenhouse Warming Potentials (GWP)

Carbon dioxide (CO₂) = 1

Methane (CH₄) = 21

~~Nitrous oxide (N₂O) = 310~~

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

~~D.5.3 Record Keeping Requirements~~

- ~~(a) To document the compliance status with Condition D.5.1, the Permittee shall maintain monthly records of the natural gas and propane usages for the insignificant combustion units in plants 1, 2 and 4, and the natural gas usage for the insignificant combustion units in plant 3.~~
- ~~(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.~~

~~D.5.4 Reporting Requirements~~

~~A quarterly summary of the information to document compliance with Condition D.5.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no 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.~~

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- (b) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.**
- (c) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.**
- (d) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.**
- (e) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.**
- (f) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).**
- (g) Cleaners and solvents having a vapor pressure equal to or less than 2kPa (15mm Hg or 0.3 psi) measured at 38 degrees C (100°F) or a vapor pressure equal to or less than 0.7 kPa (5mm Hg, or 0.1 psi) measured at 20°C (68°F), the use of which for all cleaners and solvents combined does not exceed 145 gallons per twelve (12) consecutive month period.**
- (h) Machining where an aqueous cutting coolant continuously floods the machining interface.**
- (i) Quenching operations used with heat treating processes.**
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.**
- (k) Paved and unpaved roads and parking lots with public access.**
- (l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.**

SECTION D.5 FACILITY OPERATION CONDITIONS

- (m) Stationary fire pumps.
- (n) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 326 IAC 8-3-2 (Cold Cleaning Operations)

Any degreaser using VOC containing solvents is considered a cold cleaning operation. The cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (a) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.5.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions from each of the brazing, cutting, soldering and welding processes shall not exceed the pounds per hour emission rate calculated based on the following equation:

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

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

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- ~~(b) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.~~
- ~~(c) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.~~
- ~~(d) Activities associated with the treatment of wastewater streams with an oil and grease content less~~

~~than or equal to 1% by volume.~~

- ~~(e) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.~~
- ~~(f) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).~~
- ~~(g) Cleaners and solvents having a vapor pressure equal to or less than 2kPa (15mm Hg or 0.3 psi) measured at 38 degrees C (100°F) or a vapor pressure equal to or less than 0.7 kPa (5mm Hg, or 0.1 psi) measured at 20°C (68°F), the use of which for all cleaners and solvents combined does not exceed 145 gallons per twelve (12) consecutive month period.~~
- ~~(h) Machining where an aqueous cutting coolant continuously floods the machining interface.~~
- ~~(i) Quenching operations used with heat treating processes.~~
- ~~(j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.~~
- ~~(k) Paved and unpaved roads and parking lots with public access.~~
- ~~(l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.~~
- ~~(m) Stationary fire pumps.~~
- ~~(n) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.~~

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

~~Emission Limitations and Standards [326 IAC 2-8-4(1)]~~

~~D.6.1 326 IAC 8-3-2 (Cold Cleaning Operations)~~

~~Any degreaser using VOC containing solvents is considered a cold cleaning operation. The cold cleaning operations constructed after January 1, 1980, the Permittee shall:~~

- ~~(a) Equip the cleaner with a cover;~~
- ~~(b) Equip the cleaner with a facility for draining cleaned parts;~~
- ~~(c) Close the degreaser cover whenever parts are not being handled in the cleaner;~~
- ~~(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;~~
- ~~(e) Provide a permanent, conspicuous label summarizing the operation requirements;~~
- ~~(b) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.~~

~~D.6.2 Particulate [326 IAC 6-3-2]~~

~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions from each of the brazing, cutting, soldering and welding processes shall not exceed the pounds per hour emission rate calculated based on the following~~

equation:

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

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

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

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (o) One (1) natural gas-fired emergency generator, considered a spark ignition internal combustion engine, manufactured after 2006, constructed in 2010, with a maximum heat input capacity of 0.29 MMBtu/hr, using no controls, and exhausting inside the building;

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.

Under 40 CFR 63, Subpart ZZZZ, this 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.)

New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]

E.1.1 New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]

Pursuant to 40 CFR 60, the Permittee shall comply with the provisions of New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ], which are incorporated by reference as 326 IAC 12. The provisions of 40 CFR 60, Subpart JJJJ are shown in their entirety in Attachment A to this permit.

Applicable portions of the NSPS are the following:

- (a) 40 CFR 60.4230(4)(iii),(iv)
- (b) 40 CFR 60.4233(d),(h)
- (c) 40 CFR 60.4234
- (d) 40 CFR 60.4243(b)(1),(2),(e),(f),(g)
- (e) 40 CFR 60.4244(a),(b),(c),(d)
- (f) 40 CFR 60.4245(a),(d)
- (g) 40 CFR 60.4246
- (h) 40 CFR 60.4248
- (i) 40 CFR 60, Tables 2, 3

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the emergency generator except as otherwise specified in 40 CFR 60, Subpart JJJJ.

E.1.2 Testing Requirements [40 CFR 60, Subpart JJJJ] [326 IAC 12][326 IAC 2-8-5(a)(1),(4)]

In order to demonstrate compliance with Condition E.1.1, the Permittee shall perform stack testing as required under NSPS 40 CFR 60, Subpart JJJJ, not later than five (5) years from

the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (o) One (1) natural gas-fired emergency generator, considered a spark ignition internal combustion engine, manufactured after 2006, constructed in 2010, with a maximum heat input capacity of 0.29 MMBtu/hr, using no controls, and exhausting inside the building;

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.

Under 40 CFR 63, Subpart ZZZZ, this 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 Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements for Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

E.2.1 National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, which are incorporated by reference as 326 IAC 20, as specified as follows., which are incorporated by reference as 326 IAC 20, as specified as follows. The provisions of 40 CFR 63, Subpart ZZZZ are shown in their entirety in Attachment B to this permit.

- (a) 40 CFR 63.6580
- (b) 40 CFR 63.6585
- (c) 40 CFR 63.6590(a)(2)(iii) and (c)(1)

Pursuant to 40 CFR 63.6665, the natural gas-fired emergency generator does not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

FESOP Quarterly Report

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-31356-00031
Facility: Melt Furnaces MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, and MF-9;
Insignificant Combustion Units in Plants 1, 2, 3, and 4
Parameter: Source-wide Natural Gas Usage, excluding the emergency generator
Limit: Not to exceed 1461.2 MMCF per twelve (12) consecutive months with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (mmcf)	Previous 11 Months (mmcf)	12 Month Total (mmcf)
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: _____

FESOP Quarterly Report

Source Name: Ryobi Die Casting
Source Address: 800 West Mausoleum Road, Shelbyville, Indiana 46176
FESOP Permit No.: F145-31356-00031
Facility: Melt Furnaces MF-1, MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-8, and MF-9
Parameter: Total Aluminum charged
Limit: Annual throughput not to exceed 150,000 tons per twelve (12) consecutive months with compliance determined at the end of each month.

YEAR: _____

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

Month 3			
----------------	--	--	--

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

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

- (b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:
- (1) This source has eight melting furnaces in its process. There are process emissions associated with the melting process, which were not accounted for in previous permits and calculations. The process emissions calculations for these furnaces have been added to the calculations in Appendix A of this Technical Support Document, and revised emissions limitations have been established in the permit. These changes are reflected in emissions limitations in Section D.2 of the permit.
 - (2) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 316 IAC 2. These revisions resulted in changes to the rule cites listed in the permit. These changes are not changes to the underlining provisions. The change is only to cite these rules in Section B - Operational Flexibility. IDEM, OAQ has clarified the rule cites for the Preventive Maintenance Plan.

B.11 Preventative Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][~~326 IAC 2-8-5(a)(1)~~]

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

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) **and (c)** ~~through (d)~~ without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management

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

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15 ~~(b)(2), (c)(1), and (d)~~ **(b)(1) and (c)**. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15 ~~(b)(2), (c)(1), and (d)~~ **(b)(1) and (c)**.

(b) Emission Trades [326 IAC 2-8-15 ~~(e)~~ **(b)]**

The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15 ~~(e)~~ **(b)**.

(c) Alternative Operating Scenarios [326 IAC 2-8-15 ~~(d)~~ **(c)]**

The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

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

- (3) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

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

Records of required monitoring information include the following:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.**
- (BB) The dates analyses were performed.**
- (CC) The company or entity that performed the analyses.**

- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

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

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

- (4) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

The Quarterly Deviation and Compliance Monitoring Report
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".

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on January 12, 2012. Additional information was received on February 9, 2012, and March 27, 2012.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Revision No. 145-31356-00031. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jack Harmon 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) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.

- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A Emission Summary

Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon

Emission Unit	Unlimited Potential Emissions (tons/yr)										
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	*****GHGs- CO2e	Total HAPs	Worst HAP	HAP
<u>Process Emissions</u>											
Shot Blast Units	1169.46	116.95	116.95	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	N/A
Melt Furnace Process Emissions	199.95	199.95	199.95	0.00	0.00	0.00	0.00	0.00	8.72E+00	8.72E+00	HF
Die Casting process	0.00	0.00	0.00	2.41	1.20	0.00	0.00	0.00	0.00E+00	0.00E+00	N/A
Insignificant Activities	1.00	1.00	1.00	0.00	1.00	1.00	negl.	0.00	0.00E+00	0.00E+00	N/A
<u>Combustion Units Emissions</u>											
Melt Furnace Combustion	1.14	4.55	4.55	0.36	59.83	3.29	50.26	72,233.90	1.13E+00	1.08E+00	Hexane
Plant 1 Insignificant Combustion Units	0.87	3.47	3.47	0.27	45.71	2.5	38.40	55187.02	8.63E-01	8.23E-01	Hexane
Plant 2 Insignificant Combustion Units	0.09	0.38	0.38	0.03	4.95	0.27	4.16	5,977.75	9.34E-02	8.91E-02	Hexane
Plant 3 Insignificant Combustion Units	0.97	3.90	0.05	0.31	51.30	2.82	43.09	61,933.43	9.68E-01	9.23E-01	Hexane
Plant 4 Insignificant Combustion Units	0.01	0.05	0.05	0.00	0.66	0.04	0.55	793.73	1.24E-02	1.18E-02	Hexane
Emergency Generator Combustion Unit	0.003	0.003	0.003	0.00	0.30	0.01	0.27	11.93	5.42E-03	4.00E-03	Formaldehyde
Source Total Unlimited Potential to Emit	1373.50	330.24	326.40	3.38	164.95	9.94	136.73	196,137.77	1.18E+01	8.72E+00	HF

Emission Unit	Limited / Controlled Potential Emissions (tons/yr)										
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	*****GHGs- CO2e	Total HAPs	Worst HAP	HAP
<u>Process Emissions</u>											
Shot Blast Units*	14.03	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00	N/A
Melt Furnace Process Emissions**	82.50	82.50	82.50	0.00	0.00	0.00	0.00	0.00	8.72E+00	8.72E+00	HF
Die Casting process	0.00	0.00	0.00	2.41	1.20	0.00	0.00	0.00	0.00E+00	0.00E+00	N/A
Insignificant Activities	1.00	1.00	1.00	0.00	1.00	1.00	negl.	0.00	0.00E+00	0.00E+00	N/A
<u>Combustion Units Emissions***</u>											
Melt Furnace Combustion	1.39	5.55	5.55	0.44	73.06	4.02	61.37	88,203.63	1.38E+00	1.32E+00	Hexane
Plant 1 Insignificant Combustion Units											
Plant 2 Insignificant Combustion Units											
Plant 3 Insignificant Combustion Units											
Plant 4 Insignificant Combustion Units	0.003	0.003	0.003	0.00	0.30	0.01	0.27	11.93	5.42E-03	4.00E-03	Formaldehyde
Source Total Limited Potential to Emit	98.92	98.95	98.95	2.85	75.56	5.03	61.64	88,215.56	1.01E+01	8.72E+00	HF

* - Emissions from shot blast units are controlled emissions from the scrubbers at 98.8% efficiency.

** Melt process emissions are based on limited throughput of aluminum.

*** Combustion emissions are limited emissions from sourcewide annual usage limits for natural gas, less the emergency generator fuel usage.

Revision Summary Emissions

Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon

Emission Unit	Potential Emissions (tons/yr)										
	PM	PM10	PM2.5	NOx	SOx	VOC	CO	GHGs- CO2e	Total HAPs	Worst HAP	
Melt Furnace MF-8 Combustion Emissions	0.11	0.45	0.45	5.87	0.04	0.32	4.93	70.86	1.11E-01	1.06E-01	Formaldehyde
Melt Furnace MF-9 Combustion Emissions	0.16	0.64	0.64	8.45	0.05	0.46	7.10	10,206.00	1.60E-01	1.52E-01	Formaldehyde
Melt Furnace Process Emissions*	199.95	199.95	199.95	0.00	0.00	0.0	0.00	0.00	0.00E+00	0.00E+00	N/A
Emergency Generator	0.003	0.003	0.003	0.30	0.00	0.01	0.27	11.93	5.42E-03	5.52E-02	Formaldehyde
Total	200.22	201.04	201.04	14.62	0.09	0.80	12.30	10,288.79	2.76E-01	2.76E-01	Formaldehyde

* Emissions from the melting process were never included in the emissions calculations; therefore, these emissions are a part of this revision.

Appendix A Emission Summary

Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon

Total emissions based on rated capacity of 8,760 hours/year.

Emission Unit	Potential Emissions (tons/yr)												
	PM	PM10	PM2.5	NOx	SOx	VOC	CO	Xylene	Nickel	Toluene	Hexane	Formaldehyde	Total HAPs
(10) Shot Blast Lines-SBS-6, SBS-7, SBS-9, SBS-10, SBS-11 03-SBS-01 through 03-SBS-04 and 03-SBS-06	76317	53422	53422	-	-	-	-	-	-	-	-	-	-
Seven (7) Melt Furnaces (worst fuel) MF-5, MF-6, MF-1S, MF-2M, MF-3N,MF-1,MF-7	2.56	3.58	3.58	66.57	7.68	5.1	39.4	negl.	9.84E-04	1.59E-03	0.84	0.04	0.88
Scrap handling proces	16.4	16.4	16.4	-	-	-	-	-	-	-	-	-	-
Die Casting process	-	-	-	1.20	2.41	16.9	-	-	-	-	-	-	-
Insignificant units (plants 1,2,and 4) worst fuel	2.80	3.89	3.89	72.8	8.40	2.82	43.0	-	1.08E-03	1.74E-03	0.92	0.04	0.96
Insignificant unit Plant 3 (natural gas only)	0.97	3.9	3.9	51.3	0.31	2.82	43.1	negl.	1.23E-04	1.99E-04	0.11	4.39E-03	0.11
Other insignificant units	1.00	1.00	1.00	-	1.00	1.00	negl.	negl.	negl.	negl.	negl.	negl.	negl.
Total	76340.88	53450.79	53450.79	191.86	19.80	28.62	125.48	negl.	0.00	3.53E-03	1.87	7.80E-02	1.95

Emission Unit	Limited Emissions (tons/yr)												
	PM	PM10	PM2.5	NOx	SOx	VOC	CO	Xylene	Nickel	Toluene	Hexane	Formaldehyde	Total HAPs
(10) Shot Blast Lines-SBS-6, SBS-7, SBS-9, SBS-10, SBS-11	76.3	76.3	76.3	-	-	-	-	-	-	-	-	-	-
***Seven (7) Melt Furnaces (worst fuel) MF-5, MF-6, MF-1S, MF-2M, MF-3N,MF-1,MF-7	1.85	3.56	3.56	48.1	5.55	3.70	39.4	negl.	9.84E-04	1.59E-03	0.84	0.04	0.88
Scrap handling proces	16.4	16.4	16.4	-	-	-	-	-	-	-	-	-	-
Die Casting process	-	-	-	1.20	2.41	16.9	-	-	-	-	-	-	#VALUE!
****Insignificant units (plants 1,2,3 and 4) limited fuel	1.08	2.13	2.13	28.0	3.23	2.15	23.5	negl.	5.88E-04	9.52E-04	0.50	0.02	0.53
Other insignificant units	1.00	1.00	1.00	-	-	1.00	negl.	negl.	negl.	negl.	negl.	negl.	negl.
Total	96.65	99.41	99.41	77.30	11.19	23.72	62.88	negl.	1.57E-03	2.54E-03	1.35	0.06	1.41

NOTE: Emission factors for propane fuel are updated and are from AP-42, Chapter 1.5-1 (AP-42, 07/2008).

There are no emission factors in AP-42, PM10 = PM2.5

* Each shot blaster is equipped with a dust collector. The source claims the overall control efficiency to be 99.9%.

***Melt furnaces use primary fuel as natural gas and Propane is used as a back up fuel. Emissions are based on limited Propane fuel usage of 7,400 Kilogallons per year.

****Plants 1,2,3 and 4, the limited PTE is the worst case scenerio between burning natural gas and propane and limited natural gas usage

Propane and natural gas usage limit is based on Permit No. F145-15571-00031.

**Appendix A: Emissions Calculations
PM, PM10/PM2.5 Emissions
From 10 Shotblasting Lines**

Company Name: Ryobi Die Casting (USA), Inc.

Address: 800 W. Mausoleum Road, Shelbyville, IN 46176

FESOP Renewal No.: 145-30081-00031

FESOP SPR No.: 145-31356-00031

Reviewer: Jack Harmon

Unit ID	Max. throughput Rate (lbs/hr)	PM Emission Factor (lbs/lbs)	PTE of PM before Control (lbs/hr)	PTE of PM before Control (tons/yr)	PM10/PM2.5 Emission Factor (lbs/lbs PM)	PTE of PM10/PM2.5 before Control (lbs/hr)	PTE of PM10/PM2.5 before Control (tons/yr)	Scrubber ID	Control Efficiency	PTE of PM after Control (lbs/hr)	PTE of PM after Control (tons/yr)	PTE of PM10/PM2.5 after Control (lbs/hr)	PTE of PM10/PM2.5 after Control (tons/yr)
SBS-6	3,239	0.01	32	142	0.10	3	14	WDC-4	98.80%	0.39	1.70	0.27	1.18
SBS-7	1,900	0.01	19	83	0.10	2	8	WDC-5	98.80%	0.23	1.00	0.16	0.70
SBS-9	1,640	0.01	16	72	0.10	2	7	WDC-2	98.80%	0.20	0.86	0.14	0.61
SBS-10	4,000	0.01	40	175	0.10	4	18	WDC-23	98.80%	0.48	2.10	0.34	1.49
SBS-11	1,640	0.01	16	72	0.10	2	7	WDC-5	98.80%	0.20	0.86	0.14	0.61
03-SBS-01	5,670	0.01	57	248	0.10	6	25	03-WDC-01	98.80%	0.68	2.98	0.48	2.10
03-SBS-02	1,280	0.01	13	56	0.10	1	6	03-WDC-02	98.80%	0.15	0.67	0.11	0.48
03-SBS-03	1,920	0.01	19	84	0.10	2	8	03-WDC-02	98.80%	0.23	1.01	0.16	0.70
03-SBS-04	2,403	0.01	24	105	0.10	2	11	03-WDC-01	98.80%	0.29	1.26	0.20	0.88
03-SBS-06	3,008	0.01	30	132	0.10	3	13	03-WDC-03	98.80%	0.36	1.58	0.26	1.14
Total				1,169.46			116.95				14.03		9.90

* The emission factors are from grit blasting from Air Quality Permits, Vol.1, Section 3 "Abrasive Blasting" (1991 Edition) by Stappa Alapco.

PM10 and PM2.5 limited emissions are based on a control efficiency of 91.5%.

PM limited emissions are based on a control efficiency of 98.8%.

Methodology

PTE of PM before Control (lbs/hr) = Max. Abrasive Usage (lbs/hr) x PM Emission Factor (lbs/lbs)

PTE of PM before Control (tons/yr) = Max. Abrasive Usage (lbs/hr) x PM Emission Factor (lbs/lbs) x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM10 before Control = Potential PM Emissions x PM10 Emission Factor

PTE of PM/PM10 after Control = PTE of PM/PM10 before Control x (1 - Control Efficiency)

Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon

Furnace	Throughput (lb/hr)			MMBtu/hr	MMCF/yr
	Metal	Flux	Total		
MF-5	10,000	10.0	10,010	14.4	126.1
MF-6	15,000	15.0	15,015	19.3	169.1
MF-1S	9,000	9.0	9,009	15.0	131.4
MF-2M	9,000	9.0	9,009	23.8	208.5
MF-3N	7,000	7.0	7,007	13.4	117.4
MF-1	15,000	15.0	15,015	18.0	157.7
MF-8	6,000	6.0	6,006	13.4	117.4
MF-9	12,000	12.0	12,012	19.3	169.1
TOTAL	83,000	83.0	83,083	136.6	1196.6

MMFC/yr = MMBtu/hr x 8760 hr/yr / 1000

Furnace Process Emissions

TYPE OF MATERIAL	Throughput			Capacity million British thermal units per hour/hr	Capacity mmcf/hr	Flux Usage (lb/hr)	
	LBS/HR	1 TON/2000 lbs	TON/HR				
Aluminum	83,000	2000	41.50	136.60	0.1366		
	PM	PM10/PM2.5	SOx	NOx	VOC	CO	HF
lb/ton	1.10	1.10	--	--	--	--	0.024
lb/mmcf	--	--	0	0	0	0.00	
Potential Emissions lbs/hr	45.65	45.65	0.00	0.00	0.00	0.00	1.99
Potential Emissions tons/year	199.95	199.95	0.00	0.00	0.00	0.00	8.72

Source of Emission Factors: STAPPA/ALAPCO Handbook, Volume 1, Section 11.3, Table 11-2. PM and PM10 emission factors include both metal throughput and additive throughput. The throughput includes the aluminum throughput shown in the Throughput Chart on this page. The flux contains HF. HF emission factor is from Material Safety Data Sheets (MSDS) provided by source. Throughput per hour and maximum heat input capacity were provided by the source in its application.

Methodology:

PM/PM10/PM2.5 Emissions (lb/hr) = Emission Factor (lb/ton) x Aluminum Throughput (ton/hr)
 PM/PM10/PM2.5 Emissions (ton/yr) = Emissions (lb/hr) x 8760 (hours/hr) / 2000 (lb/ton)
 HF Emissions (lb/hr) = Emission Factor (lb PM / lb flux) x Maximum Usage of Flux (lb flux/hr)
 HF Emissions (ton/yr) = HF Emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)
 SO2, NOx, VOC, CO Emissions are for combustion, and, therefore, are shown in the calculations for Combustion

Individual Furnace PTE Calculation for 326 IAC 1-7 applicability

Melting Furnace	E.F. (lb/ton)	Throughput (lb/hr)	Throughput (tons/hr)	PM PTE		PM10/PM2.5 PTE	
				lbs/hr	tons/yr	lbs/hr	tons/yr
MF-5	1.1	10,000	5.00	5.50	24.09	5.50	24.09
MF-6	1.1	15,000	7.50	8.25	36.14	8.25	36.14
MF-1S	1.1	9,000	4.50	4.95	21.68	4.95	21.68
MF-2M	1.1	9,000	4.50	4.95	21.68	4.95	21.68
MF-3N	1.1	7,000	3.50	3.85	16.86	3.85	16.86
MF-1S	1.1	15,000	7.50	8.25	36.14	8.25	36.14
MF-8	1.1	6,000	3.00	3.30	14.45	3.30	14.45
MF-9	1.1	12,000	6.00	6.60	28.91	6.60	28.91
Totals			41.50		199.95		199.95

Methodology is same as above table

PM PTE for Melt Furnaces MF-6, MF-1S, MF-9 are each greater than 25 tons/yr, and, therefore, are subject to 326 IAC 1-7.

Appendix A: Emission Calculations

Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon

Throughput limited to 150,000 ton/yr = 17.12 ton/hr
 = 34,246 lb/hr

Furnace Process Emissions

TYPE OF MATERIAL	Limited Throughput			Capacity	Capacity	Flux Usage
	LBS/HR	1 TON/2000 lbs	TON/HR	million British thermal units per hour/hr	mmcf/hr	(lb/hr)
Aluminum	34,246	2000	17.12	136.60	0.1366	
	PM	PM10/PM2.5	SOx	NOx	VOC	CO
lb/ton	1.10	1.10	--	--	--	--
lb/mmcf	--	--	0	0	0	0.00
Potential Emissions lbs/hr	18.84	18.84	0.00	0.00	0.00	0.00
Potential Emissions tons/year	82.50	82.50	0.00	0.00	0.00	0.00
						8.72

Source of Emission Factors: STAPPA/ALAPCO Handbook, Volume 1, Section 11.3, Table 11-2. PM and PM10 emission factors include metal throughput .

The throughput includes the aluminum throughput shown in the Throughput Chart on this page .

The flux contains HF. HF emission factor is from Material Safety Data Sheets (MSDS) provided by source. HF emissions are not limited, since HF is below 10.0 tons per year.

Throughput per hour and maximum heat input capacity were provided by the source in its application.

Methodology:

PM/PM10/PM2.5 Emissions (lb/hr) = Emission Factor (lb/ton) x Total Throughput (ton/hr)

PM/PM10/PM2.5 Emissions (ton/yr) = Emissions (lb/hr) x 8760 (hours/hr) / 2000 (lb/ton)

HF Emissions (lb/hr) = Emission Factor (lb PM / lb flux) x Maximum Usage of Flux (lb flux/hr)

HF Emissions (ton/yr) = HF Emissions (lb/hr) x 8760 (hr/yr) / 2000 (lb/ton)

SO2, NOx, VOC, CO Emissions are for combustion, and, therefore, are shown in the calculations for Combustion

Furnace	Throughput (lb/hr)			MMBtu/hr	MMCF/yr
	Metal	Flux	Total		
MF-5	10,000	10.0	10,010	14.4	126.1
MF-6	15,000	15.0	15,015	19.3	169.1
MF-1S	9,000	9.0	9,009	15.0	131.4
MF-2M	9,000	9.0	9,009	23.8	208.5
MF-3N	7,000	7.0	7,007	13.4	117.4
MF-1	15,000	15.0	15,015	18.0	157.7
MF-8	6,000	6.0	6,006	13.4	117.4
MF-9	12,000	12.0	12,012	19.3	169.1
TOTAL	83,000	83.0	83,083	136.6	1196.6

MMFC/yr = MMBtu/hr x 8760 hr/yr / 1000

**Appendix A: Emission Calculations
Emissions from the Die Casting Process**

Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon

Max. Al Input
tons/hr

Potential Throughput
MMCF/yr

27.5

	Pollutant					
	PM*	PM10*	SO ₂	NO _x	VOC*	CO
Emission Factor in lbs/ton	-	-	0.02	0.01	0	-
Potential to Emit in tons/yr	0.0	0.0	2.41	1.20	0.0	0.0

Notes: Emission factors for SO₂ and NO_x are from FIRE, Version 6.24, for Aluminum Pouring/Casting (SCC 30400114).
 * Emission factor for VOC of 0.14 lb/ton is not applicable for this source because of the nature of this process. The aluminum is piped directly from the furnace bath into the die cast molds in a closed system. Therefore, there are no VOC emissions, due to this source-specific process. IDEM, OAQ, recognizes that there are no particulate emissions from the die casting process.

Methodology

Potential to Emit (tons/yr) = Max. Al Input (tons/hr) x Emission Factor (lbs/ton) x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Combustion Emissions from Seven (7) Melt Furnaces
Eight (8) Melt Furnaces MF-5, MF-6, MF-1S, MF-2M, MF-3N, MF-1 MF-8, and MF-9

Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon

1. From Natural Gas Combustion (<100 MMBtu/hr):

Total Heat Input MMBtu/hr		Potential throughput MMCF/yr		Pollutant					
136.600		1196.62		PM	PM10*	SO ₂	**NO _x	VOC	CO
				1.9	7.6	0.6	100	5.5	84.0
Unit ID	Heat Input Capacity (MMBtu/hr)	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)	PTE of SO ₂ (tons/yr)	PTE of NO _x (tons/yr)	PTE of VOC (tons/yr)	PTE of CO (tons/yr)		
MF-5	14.4	0.12	0.48	0.04	6.31	0.35	5.30		
MF-6	19.3	0.16	0.64	0.05	8.45	0.46	7.10		
MF-1S	15.0	0.12	0.50	0.04	6.57	0.36	5.52		
MF-2M	23.8	0.20	0.79	0.06	10.4	0.57	8.76		
MF-3N	13.4	0.11	0.45	0.04	5.87	0.32	4.93		
MF-1	18.0	0.15	0.60	0.05	7.88	0.43	6.62		
MF-8	13.4	0.11	0.45	0.04	5.87	0.32	4.93		
MF-9	19.3	0.16	0.64	0.05	8.5	0.46	7.10		
Total	136.60	1.14	4.55	0.36	59.83	3.29	50.26		

*PM10 emission factor is condensable and filterable PM10 combined.
 **Emission factors for NO_x: Uncontrolled = 100 lbs/MMCF.
 Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3 (AP-42 Supplement D 3/98).

Methodology

PTE (tons/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu x Emission Factor (lbs/MMCF) x 1 ton/2000 lbs

HAPs

Emission Factor in lb/MMcf	HAPs - Organics					Total
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03		
Potential Emission in tons/yr	1.256E-03	7.180E-04	4.487E-02	1.077E+00	2.034E-03	1.126E+00

Emission Factor in lb/MMcf	HAPs - Metals					Total
	Lead	Cadmium	Chromium	Manganese	Nickel	
5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03		
Potential Emission in tons/yr	2.992E-04	6.581E-04	8.376E-04	2.274E-04	1.256E-03	3.279E-03

Methodology is the same as above.

Total HAPs **1.129E+00**
 Worst HAP 1.077E+00

Hexane

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

updated 7/11

GHG

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO ₂	CH ₄	N ₂ O
120,000	2.3	2.2	
Potential Emission in tons/yr	71,797	1.4	1.3
Summed Potential Emissions in tons/yr	71,800		
CO ₂ e Total in tons/yr	72,234		

Methodology

The N₂O Emission Factor for uncontrolled is 2.2. The N₂O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO₂e (tons/yr) = CO₂ Potential Emission ton/yr x CO₂ GWP (1) + CH₄ Potential Emission ton/yr x CH₄ GWP (21) + N₂O

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon**

Plant 1 Insignificant Combustion Units

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
104.363	1000	914.2

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.9	3.5	3.5	0.3	45.7	2.5	38.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Detailed Listing of Combustion Units for this plant are listed in Combustion Units Worksheet

Methodology

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon**

Plant 1 Insignificant Combustion Units

HAPs - Organics						Total
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	
Potential Emission in tons/yr	9.599E-04	5.485E-04	3.428E-02	8.228E-01	1.554E-03	8.601E-01

HAPs - Metals						Total
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission in tons/yr	2.286E-04	5.028E-04	6.400E-04	1.737E-04	9.599E-04	2.505E-03

Methodology is the same as previous page.

Total HAPs 8.626E-01

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See next page for Greenhouse Gas calculations.

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

Greenhouse Gas Emissions

Company Name: Ryobi Die Casting (USA), Inc.

Address: 800 W. Mausoleum Road, Shelbyville, IN 46176

FESOP Renewal No.: 145-30081-00031

FESOP SPR No.: 145-31356-00031

Plant 1 Insignificant Combustion Units

Reviewer: Jack Harmon

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	54,853	1.1	1.0
Summed Potential Emissions in tons/yr	54,855		
CO2e Total in tons/yr	55,187		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon**

Plant 2 Insignificant Combustion Units

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
11.304	1000	99.0

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.1	0.4	0.4	0.0	5.0	0.3	4.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Detailed Listing of Combustion Units for this plant are listed in Combustion Units Worksheet

Methodology

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon**

Plant 2 Insignificant Combustion Units

HAPs - Organics						Totals
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	
Potential Emission in tons/yr	1.040E-04	5.942E-05	3.713E-03	8.912E-02	1.683E-04	9.317E-02

HAPs - Metals						Totals
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission in tons/yr	2.476E-05	5.446E-05	6.932E-05	1.882E-05	1.040E-04	2.713E-04

Methodology is the same as previous page.

Total HAPs 9.344E-02

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See next page for Greenhouse Gas calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Greenhouse Gas Emissions
Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon

Plant 2 Insignificant Combustion

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	5,942	0.1	0.1
Summed Potential Emissions in tons/yr	5,942		
CO2e Total in tons/yr	5,978		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

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

**Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon**

Plant 3 Insignificant Combustion Units

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
117.121	1000	1026.0

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	1.0	3.9	3.9	0.3	51.3	2.8	43.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Detailed Listing of Combustion Units for this plant are listed in Combustion Units Worksheet

Methodology

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon**

Plant 3 Insignificant Combustion Units

HAPs - Organics						Totals
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	
Potential Emission in tons/yr	1.077E-03	6.156E-04	3.847E-02	9.234E-01	1.744E-03	9.653E-01

HAPs - Metals						Totals
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission in tons/yr	2.565E-04	5.643E-04	7.182E-04	1.949E-04	1.077E-03	2.811E-03

Methodology is the same as previous page.

Total HAPs 9.681E-01

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See next page for Greenhouse Gas calculations.

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

Greenhouse Gas Emissions

Company Name: Ryobi Die Casting (USA), Inc.

Address: 800 W. Mausoleum Road, Shelbyville, IN 46176

FESOP Renewal No.: 145-30081-00031

FESOP SPR No.: 145-31356-00031

Plant 3 Insignificant Combustion Units

Reviewer: Jack Harmon

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
120,000	2.3	2.2	
Potential Emission in tons/yr	61,559	1.2	1.1
Summed Potential Emissions in tons/yr	61,561		
CO2e Total in tons/yr	61,933		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon**

Plant 4 Insignificant Combustion Units

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
1.501	1000	13.1

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.01	0.05	0.05	0.00	0.66	0.04	0.55

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Detailed Listing of Combustion Units for this plant are listed in Combustion Units Worksheet

Methodology

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon**

Plant 4 Insignificant Combustion Units

HAPs - Organics						TOTALS
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	
Potential Emission in tons/yr	1.381E-05	7.889E-06	4.931E-04	1.183E-02	2.235E-05	1.237E-02

HAPs - Metals						TOTALS
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission in tons/yr	3.287E-06	7.232E-06	9.204E-06	2.498E-06	1.381E-05	3.603E-05

Methodology is the same as previous page.

Total HAPs 1.241E-02

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See next page for Greenhouse Gas calculations.

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

Greenhouse Gas Emissions

Company Name: Ryobi Die Casting (USA), Inc.

Address: 800 W. Mausoleum Road, Shelbyville, IN 46176

FESOP Renewal No.: 145-30081-00031

FESOP SPR No.: 145-31356-00031

Plant 4 Insignificant Combustion Units

Reviewer: Jack Harmon

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
120,000	2.3		2.2
Potential Emission in tons/yr	789	0.0	0.0
Summed Potential Emissions in tons/yr	789		
CO2e Total in tons/yr	794		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

updated 7/11

**Appendix A: Emission Calculations
 Reciprocating Internal Combustion Engines - Natural Gas
 Output Rating (<=600 HP)
 Maximum Input Rate (<=4.2 MMBtu/hr)**

**Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon**

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity (MMBtu/hr)	0.29
Maximum Hours Operated per Year	500
Potential Throughput (MMBtu/yr)	145

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.0384	0.0384	0.0384	5.88E-04	4.08	0.12	3.72
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.30	0.01	0.27

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							Total PAH HAPs***
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	
Emission Factor in lb/MMBtu	1.94E-03	9.63E-04	2.68E-04	3.91E-05	5.52E-02	8.36E-03	7.78E-03	1.68E-04
Potential Emission in tons/yr	1.41E-04	6.98E-05	1.94E-05	2.83E-06	4.00E-03	6.06E-04	5.64E-04	1.22E-05
Potential Emission of Total HAPs (tons/yr)								5.42E-03

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	1.64E+02	6.61E-03	1.32E-03
Potential Emission in tons/yr	1.19E+01	4.80E-04	9.59E-05

Summed Potential Emissions in tons/yr		1.19E+01
CO2e Total in tons/yr		1.19E+01

Methodology

Emission Factors are from AP42 Ch. 3.2
 CH4 and N2O 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.

Methodology

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [500 Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

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

**Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon**

Sourcewide Natural Gas Usage Limit

Heat Input Capacity MMBtu/hr	HHV	Sourcewide Limited Throughput (MMCF/yr)
	mmBtu	
	mmscf	
166.800	1000	1461.2

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	1.39	5.55	5.55	0.44	73.06	4.02	61.37

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Detailed Listing of Combustion Units for this plant are listed in Combustion Units Worksheet

Methodology

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

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

**Company Name: Ryobi Die Casting (USA), Inc.
 Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
 FESOP Renewal No.: 145-30081-00031
 FESOP SPR No.: 145-31356-00031
 Reviewer: Jack Harmon**

Sourcewide Natural Gas Usage Limit

		HAPs - Organics					TOTALS
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03		
Potential Emission in tons/yr	1.534E-03	8.767E-04	5.479E-02	1.315E+00	2.484E-03	1.375E+00	
		HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03		
Potential Emission in tons/yr	3.653E-04	8.036E-04	1.023E-03	2.776E-04	1.534E-03	4.004E-03	
						Total HAPs	1.379E+00

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See next page for Greenhouse Gas calculations.

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

Greenhouse Gas Emissions

Company Name: Ryobi Die Casting (USA), Inc.

Address: 800 W. Mausoleum Road, Shelbyville, IN 46176

FESOP Renewal No.: 145-30081-00031

FESOP SPR No.: 145-31356-00031

Sourcewide Natural Gas Usage Limit

Reviewer: Jack Harmon

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	87,670	1.7	1.6
Summed Potential Emissions in tons/yr	87,673		
CO2e Total in tons/yr	88,204		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr

updated 7/11

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

**Company Name: Ryobi Die Casting (USA), Inc.
Address: 800 W. Mausoleum Road, Shelbyville, IN 46176
FESOP Renewal No.: 145-30081-00031
FESOP SPR No.: 145-31356-00031
Reviewer: Jack Harmon**

Furnaces	
Furnace	MMBtu/hr
MF-5	14.40
MF-6	19.30
MF-1S	15.00
MF-2M	23.80
MF-3N	13.40
MF-1S	18.00
MF-8	13.40
MF-9	19.30
	136.60

Plant 1 Units			
Descript.	MMBtu/hr	No. Units	Total MMBtu/hr
Pre-heat	0.008	3.0	0.024
Makeup Air	1.02	1.0	1.02
Makeup Air	1.972	3.0	5.916
Makeup Air	2.066	1.0	2.066
Makeup Air	2.137	4.0	8.548
Makeup Air	2.1875	16.0	35
Makeup Air	2.324	2.0	4.648
Makeup Air	2.5	1.0	2.5
Makeup Air	3.052	2.0	6.104
Makeup Air	3.327	6.0	19.962
Makeup Air	4.1	1.0	4.1
Makeup Air	5.0	1.0	5
Space Htr	0.1	51.0	5.1
Door Htrs	0.4	10.0	4
Office Htrs	0.215	1.0	0.215
Office Htrs	0.16	1.0	0.16
	Total PL 1	104.0	104.363

Plant 2 Units			
Descript.	MMBtu/hr	No. Units	Total MMBtu/hr
Makeup Air	0.75	1.0	0.75
Air Curtain	3.5	1.0	3.5
Air Curtain	3.0	1.0	3.0
Air Curtain	2.203	1.0	2.203
Space Htr	0.2	9.0	1.8
Office Htrs	0.0514	1.0	0.0514
	Total PL 2	14.0	11.304

Plant 3 Units			
Descript.	MMBtu/hr	No. Units	Total MMBtu/hr
Pre-heat	2.0	2.0	4.0
Door Htrs	0.4	6.0	2.4
Door Htrs	0.814	8.0	6.512
Makeup Air	0.751	1.0	0.751
Makeup Air	1.503	2.0	3.006
Makeup Air	1.784	6.0	10.704
Makeup Air	1.972	1.0	1.972
Makeup Air	2.536	3.0	7.608
Makeup Air	3.287	4.0	13.148
Makeup Air	3.945	16.0	63.12
Space Htr	0.1	39.0	3.9
	Total PL 3	88.0	117.121

Plant 4 Units			
Descript.	MMBtu/hr	No. Units	Total MMBtu/hr
Unit Htrs	0.216	5.0	1.08
Door Htrs	0.39	1.0	0.39
AC/Htr	0.031	1.0	0.031
	Total PL 4	7.0	1.501



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Lynn Funk
Ryobi Die Casting (USA), Inc
800 W Mausoleum Rd
Shelbyville, IN 46176

DATE: June 28, 2012

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

SUBJECT: Final Decision
Significant Permit Revision
145-31356-00031

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:
Tom Johnson (President)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



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June 28, 2012

TO: Shelby County Public Library – Shelbyville

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Ryobi Die Casting (USA), Inc
Permit Number: 145-31356-00031

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 6/28/2012 Ryobi Die Casting (USA), Inc. 145-31356-00031 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Lynn Funk Ryobi Die Casting (USA), Inc. 800 W Mausoleum Rd Shelbyville IN 46176 (Source CAATS) via confirm delivery										
2		Tom Johnson President Ryobi Die Casting (USA), Inc. 800 W Mausoleum Rd Shelbyville IN 46176 (RO CAATS)										
3		Mr. Hugh Garner 10203 S Degelow Road Milroy IN 46156 (Affected Party)										
4		Shelbyville City Council and Mayors Office 44 West Washington Shelbyville IN 46176 (Local Official)										
5		Shelby County Commissioners 25 West Polk Shelbyville IN 46176 (Local Official)										
6		Shelbyville Shelby Co Public 57 W Broadway Shelbyville IN 46176-1294 (Library)										
7		Karla Friesen 575 Mountain Avenue Murray Hill NJ 07974 (Affected Party)										
8		Shelby County Health Department 1600 E. SR 44B Shelbyville IN 46176 (Health Department)										
9		Margaret Brunk Shelby County Council PO Box 107 Fountaintown In 46130 (Affected Party)										
10		Tami Grubbs Shelby County Council 2961 N 100 W Shelbyville In 46176 (Affected Party)										
11		Nisha Sizemore Cornerstone Environmental 880 Lennox Court Zionsville IN 46077 (Consultant)										
12												
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