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

Michael R. Pence
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: March 14, 2013

RE: Grede, LLC/065-31928-00007

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, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

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

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

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

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

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

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

Recycled Paper An Equal Opportunity Employer *Please Recycle*

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

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

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

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

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

Enclosures
FNTVOP.dot12/3/07

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Grede LLC
2700 East Plum Street
New Castle, Indiana 47362

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

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

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

Operation Permit No.: T 065-31928-00007	
Issued by: Tripurari Sinha Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: March 14, 2013 Expiration Date: March 14, 2018

TABLE OF CONTENTS

A. SOURCE SUMMARY

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

B. GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]
B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]
B.3 Term of Conditions [326 IAC 2-1.1-9.5]
B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]
B.5 Severability [326 IAC 2-7-5(5)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]
B.11 Emergency Provisions [326 IAC 2-7-16]
B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]
B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]
B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]
B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]
B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
B.20 Source Modification Requirement [326 IAC 2-7-10.5]
B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]
B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

C. SOURCE OPERATION CONDITIONS

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]
C.2 Opacity [326 IAC 5-1]
C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
C.5 Fugitive Dust Emissions [326 IAC 6-4]
C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]
C.7 Stack Height [326 IAC 1-7]
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-7-6(1)]
C.9 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]
C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]
C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64] [326 IAC 3-8]
C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]
C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
C.15 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]
C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)] [326 IAC 2-6]
C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]
C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 64][326 IAC 3-8]

Stratospheric Ozone Protection
C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.1.3 Particulate Matter (PM)

Compliance Determination Requirements
D.1.2 Testing Requirements [326 IAC 2-1.1-11]

D.2 EMISSIONS UNIT OPERATION CONDITIONS
D.2.1 CO PSD BACT Requirements [326 IAC 2-2-3]
D.2.2 PSD Minor Limit [326 IAC 2-2]
D.2.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.2.6 Testing Requirements [326 IAC 2-1.1-11]
D.2.7 Particulate Matter (PM)

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]
D.2.8 Visible Emissions Notation
D.2.9 Parametric Monitoring
D.2.10 Broken or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.2.11 Record Keeping Requirement
D.2.12 Reporting Requirement

D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.3.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.3.3 Testing Requirements [326 IAC 2-1.1-11]
D.3.4 Particulate Matter (PM)

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]
D.3.5 Visible Emissions Notations
D.3.6 Parametric Monitoring
D.3.7 Broken or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.3.8 Record Keeping Requirement

D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]
D.4.2 PSD Minor Limit [326 IAC 2-2]
D.4.3 Particulate Matter (PM) [326 IAC 6-3-2]

Compliance Determination Requirements
D.4.4 VOC Emissions
D.4.5 Particulate Matter (PM)

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.4.6 Record Keeping Requirement
D.4.7 Reporting Requirement

D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.5.1 Particulate Matter (PM) [326 IAC 6-3-2]

Compliance Determination Requirements
D.5.2 Particulate Matter (PM)

E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]
E.1.2 Iron and Steel Foundries Requirements [40 CFR Part 63, Subpart EEEEE]

E.2 EMISSIONS UNIT OPERATION CONDITIONS

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 20-1] [40 CFR 63, Subpart A]

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

Certification
Emergency Occurrence Report
Part 70 Usage Report
Quarterly Report
Quarterly Deviation and Compliance Monitoring Report

Attachment A: Iron and Steel Foundries Requirements [40 CFR Part 63, Subpart EEEEE]
Attachment B: Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82]

SECTION A SOURCE SUMMARY

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

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

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

Source Address:	2700 East Plum Street, New Castle, Indiana 47362
General Source Phone Number:	(765) 593-3214
SIC Code:	3321
County Location:	Henry
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

(a) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(b) one (1) charge handling system, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, exhausting through general ventilation;

(c) one (1) natural gas-fired scrap preheater, constructed in 2012, with a maximum heat input of 9.16 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(d) one (1) inoculation process, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, with particulate matter emissions controlled by a collection hood ducted to one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(e) one (1) molding operation (ID No. Mold Line #1), constructed in 1993, consisting of the following:

(1) one (1) sand muller (ID No. Line #1 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 102.5 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(2) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(3) one (1) metal cooling operation (ID No. Line #1 Cooling), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(4) one (1) mold shakeout operation (ID No. Line #1 Shakeout) and associated shakeout conveyor, with a maximum ductile iron casting throughput of 10.25 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(5) one (1) casting finishing operation, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast), each with a maximum throughput of 5.125 tons per hour of ductile iron castings, both controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10);

(B) four (4) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, all controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10).

Note: all the above operations which exhaust through stack ID No. S-1, are controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3).

(f) one (1) molding operation (ID No. Mold Line #2), constructed in 1968, consisting of the following:

(1) one (1) sand handling operation (ID No. Line #2 Sand) with a maximum mold sand throughput of 107.5 tons per hour, controlled by one (1) dust collector identified as collector #5, exhausting through stack S-5. The sand handling operations including the sand muller (ID Line #2 Muller), the return sand system, the casting and sand shaker conveyors, the sand transfer belt conveyors, and the sand shaker conveyors;

(2) one (1) metal pouring/cooling operation (ID No. Line #2 Pour/Cool), with a maximum throughput of 10.75 tons per hour of ductile iron, exhausting into the building;

(3) one (1) shakeout operation (ID No. Line #2 Shakeout) with a maximum throughput of 10.75 tons per hour of ductile iron, controlled by one (1) dust collector identified as collector #2, exhausting through stack S-2;

(4) One (1) shotblast machine, (ID Nos. #3 Shotblast), with a maximum throughput of 10.75 tons per hour of ductile iron castings, controlled by one (1) dust collector #6, exhausting through stack S-6;

(5) Three (3) grinders, with a total nominal throughput of 2.7 tons per hour of ductile iron castings, controlled by one (1) dust collector #6, exhausting through stack S-6;

(6) Four (4) grinders, with a total nominal throughput of 3.6 tons per hour of ductile iron castings, controlled by one (1) dust collector #10, exhausting through stack S-10;

(g) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a nominal throughput of 5.1 tons of sand per hour with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a nominal throughput of 4.08 tons of sand per hour, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID West 321 (constructed in 2012)), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the West 321 Core Machine having a nominal throughput of 4.08 tons of sand per hour and each of the remaining five (5) core machines with a nominal throughput of 1.5 tons of sand per hour, all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

No fluxing operation is performed at this plant.

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

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

(a) Propane or liquified petroleum gas, or butane-fired combustion sources with heat input equal to or less than six (6) million Btu per hour.

(b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(c) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

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

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

(f) Emergency engines as follows:

One (1) diesel emergency generator installed in 1998, rated at 73 horsepower.[40 CFR 63, Subpart ZZZZ].

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

(h) Operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including pneumatic conveying as follows:

(1) One (1) pneumatically conveyed core sand reclaim system with one (1) dust collector for particulate matter control, exhausting to the general ventilation.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T 065-31928-00007, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T 065-31928-00007 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

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

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

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

(1) That this permit contains a material mistake.

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

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

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

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

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

Indiana Department of Environmental Management

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) fugitive particulate matter emissions shall be controlled according to the plan submitted on August 1, 1996. The plan consist of:

(a) Fugitive particulate matter emissions from the scrap yard shall be controlled by the following measures:

i. Keep the area around the scrap piles clean.
ii. Addition of water to the paths on severe days (very dry), as required to limit dust generation

iii. Roll-up doors to scrap piles will be lowered as necessary to limit dust generation.

(b) fugitive particulate matter emissions from paved roads and parking lots shall be controlled by sweeping all paved roads at least once per month, weather permitting.

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The

notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(a) 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

(a) The Permittee 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.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.15 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

(II)

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

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

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

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

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

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

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

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

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

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

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

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

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

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

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

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

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

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

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

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:
- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the Part 70 permit.

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

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

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of

permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

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

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

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

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

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

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

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

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

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 64][326 IAC 3-8]

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

(b) The address for report submittal is:

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

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

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

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

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

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

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

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

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

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

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

Reports required in this part shall be submitted to:

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

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

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

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

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

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

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

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

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(b) one (1) charge handling system, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, exhausting through general ventilation;

(c) one (1) natural gas-fired scrap preheater, constructed in 2012, with a maximum heat input of 9.16 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(d) one (1) inoculation process, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, with particulate matter emissions controlled by a collection hood ducted to one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

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

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

D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the particulate matter (PM) emissions from the equipment listed above shall not exceed the pound per hour emission rate as given in the table below:

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)
Electric Induction Furnace #1	5.5	12.85
Electric Induction Furnace #2	5.5	12.85
Electric Induction Furnace #3	5.0	12.05
Electric Induction Furnace #4	5.0	12.05
Charge Handling System	21.0	31.53
Scrap Preheater	21.0	31.53
Inoculation Process	21.0	31.53

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

A Preventive Maintenance Plan is required for the emission units and their control devices , Collector #7. 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.1.3 Testing Requirements [326 IAC 2-1.1-11]

In order to determine compliance status with Condition D.1.1, the Permittee shall perform PM testing on Dust Collector #7 controlling emissions from the electric induction furnaces, scrap preheater and inoculation process utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C -- Performance Testing.

D.1.4 Particulate Matter (PM)

Collector #7 shall be in operation whenever any associated process is in operation.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) one (1) molding operation (ID No. Mold Line #1), constructed in 1993, consisting of the following:

(1) one (1) sand muller (ID No. Line #1 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 102.5 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(2) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(3) one (1) metal cooling operation (ID No. Line #1 Cooling), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(4) one (1) mold shakeout operation (ID No. Line #1 Shakeout) and associated shakeout conveyor, with a maximum ductile iron casting throughput of 10.25 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(5) one (1) casting finishing operation, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast), each with a maximum throughput of 5.125 tons per hour of ductile iron castings, both controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10);

(B) four (4) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, all controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10).

Note: all the above operations which exhaust through stack ID No. S-1, are controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3).

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

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

D.2.1 CO PSD BACT Requirements [326 IAC 2-2-3]

(a) Pursuant to the requirements of 326 IAC 2-2-3 (PSD), the Best Available Control Technology (BACT), the Mold Line 1 pouring, cooling and shakeout combined CO emissions shall not exceed 6.0 lb/ton.

(b) The throughput of metal to Mold Line #1 shall be less than 76,572 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.2.2 PSD Minor Limit [326 IAC 2-2]

(a) Emissions of PM and PM-10 shall be limited as follows:

(1) PM and PM10 emissions from the Mold Line #1 sand muller, pouring, cooling, shakeout, and casting transfer operation that exhaust through stack S-1 shall be less than 18.27 and 8.5 pounds per hour, respectively;

(2) PM and PM10 emissions from Shot Blast #1, Shot Blast #2, and the four grinders that exhaust through stack S-10 shall be less than 0.66 and 1.5 pound per hour, respectively;

(3) PM and PM10 emissions from the North Core Sand Mixer, listed in section D.4, shall be less than 1.40 and 0.54 pounds per hour, respectively; and

(4) PM and PM10 emissions from the South Core Sand Mixer, listed in section D.4, shall be less than 1.40 and 0.54 pounds per hour, respectively.

(b) VOC emissions from the Mold Line #1 pouring, cooling and shakeout operations shall not exceed 1.34 pounds of VOC per ton of metal charged;

(c) The throughput of metal to Mold Line #1 shall be less than 76,572 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

These limits will insure that PM and PM10 emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line in 1993), shall be less than the PSD major modification thresholds of 25 and 15 tons per year, respectively. The metal throughput limit and the VOC emission limits will insure that VOC emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line in 1993,) from Mold Line #1 shall be less than the PSD major modification threshold of 40 tons per year. Therefore, compliance with these limits makes 326 IAC 2-2 (PSD) not applicable to the 1993 modification for PM, PM10 and VOC.

D.2.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the particulate matter emissions from the equipment listed above shall not exceed the pound per hour emission rate as given in the table below:

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)
Mold Line 1 Sand Muller	102.5	51.53
Mold Line #1 Pouring Operation	112.75	52.49
Mold Line #1 Cooling Operation	112.75	52.49
Mold Line #1 Shakeout Operation	112.75	52.49
Shot Blast #1	5.125	12.25
Shot Blast #2	5.125	12.25
Mold Line #1 Grinders	0.89 (each)	3.79 (each)

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

Or

Interpolation of the data for the process weight rate in excess sixty thousand (60,000) pounds per hour was determined by use of the equation:

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

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

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to CP 065-2749-00007, issued on March 24,1993, BACT for the #1 Mold Line Pouring and Shakeout operations shall be the following:

(a) VOC emissions from the Mold Line #1 Pouring, Cooling and Shakeout operations shall not exceed 1.34 pounds of VOC per ton of metal charged;

(b) The throughput of metal to Mold Line #1 shall be less than 76,572 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the shotblast 1 and shotblast 2, and their control devices, Collector #10. 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.2.6 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing on Dust Collectors #1 and #3 controlling emissions from the metal pouring, metal cooling, mold shakeout, casting transfer, and sand handling operations; and PM and PM_{10} testing on Dust Collector #10 controlling emissions from the casting finishing operations utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance determination. Testing shall be conducted in accordance with Section C -- Performance Testing.

D.2.7 Particulate Matter (PM)

In order to ensure compliance with Conditions D.2.2 and D.2.3

(a) Collector #1 and Collector #3 shall be in operation at all times the Mold Line #1 sand muller is in operation.

(b) Collector #10 shall be in operation at all times the shot blast #1 is in operation.

(c) Collector #10 shall be in operation at all times the shot blast #2 is in operation.

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

D.2.8 Visible Emissions Notation

(a) Visible emission notations of stack S-1 and S-10 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.2.9 Parametric Monitoring

The Permittee shall record the pressure drop across Collector #1, Collector #3, and Dust Collector # 10 used in conjunction with Mold Line #1, at least once per day when Mold Line #1 is in operation. When for any one reading, the pressure drop across Collector #1, Collector #3, and Collector #10 are outside the normal range of 3.0 to 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered a violation of this permit.

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

D.2.10 Broken or Failed Bag Detection

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

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

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

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

D.2.11 Record Keeping Requirement

(a) To document the compliance status with Conditions D.2.2 and D.2.4, the Permittee shall maintain records of the monthly metal throughputs to Mold Line #1.

(b) To document compliance status with Condition D.2.8, the Permittee shall maintain a daily record of visible emission notations of the facilities' stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(c) To document compliance status with Condition D.2.9, the Permittee shall maintain daily records of the pressure drop across Dust Collector #10 controlling emissions from the shot blasts. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

D.2.12 Reporting Requirement

A quarterly summary of the information to document compliance status with Conditions D.2.2 and D.2.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the responsible official as defined by 326 IAC 2-7-1(34).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) one (1) molding operation (ID No. Mold Line #2), constructed in 1968, consisting of the following:

(1) one (1) sand handling operation (ID No. Line #2 Sand) with a maximum mold sand throughput of 107.5 tons per hour, controlled by one (1) dust collector identified as collector #5, exhausting through stack S-5. The sand handling operations including the sand muller (ID Line #2 Muller), the return sand system, the casting and sand shaker conveyors, the sand transfer belt conveyors, and the sand shaker conveyors;

(2) one (1) metal pouring/cooling operation (ID No. Line #2 Pour/Cool), with a maximum throughput of 10.75 tons per hour of ductile iron, exhausting into the building;

(3) one (1) shakeout operation (ID No. Line #2 Shakeout) with a maximum throughput of 10.75 tons per hour of ductile iron, controlled by one (1) dust collector identified as collector #2, exhausting through stack S-2;

(4) One (1) shotblast machine, (ID Nos. #3 Shotblast), with a maximum throughput of 10.75 tons per hour of ductile iron castings, controlled by one (1) dust collector #6, exhausting through stack S-6;

(5) Three (3) grinders, with a total nominal throughput of 2.7 tons per hour of ductile iron castings, controlled by one (1) dust collector #6, exhausting through stack S-6;

(6) Four (4) grinders, with a total nominal throughput of 3.6 tons per hour of ductile iron castings, controlled by one (1) dust collector #10, exhausting through stack S-10;

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

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

D.3.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the particulate matter emissions from the equipment listed above shall not exceed the pound per hour emission rate as given in the table below:

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)
Mold Line #2 Sand Handling	107.5	52.01
Mold Line #2 Pouring/Cooling	118.25	52.98
Mold Line #2 Shakeout Operation	118.25	52.98
Shot Blast #3	10.75	20.13
3 grinders exhausting to S-6	2.70	7.98
4 grinders exhausting to S-10	3.6	9.67

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

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required is required for Dust Collectors #5, #6, and #10. Section B - Preventive Maintenance Plan contains the Permittee's Compliance Determination Requirements.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM testing on Dust Collector #5 controlling emissions from the sandhandling, metal pouring and mold shakeout operations, and Dust Collector #6 controlling emissions from shot blast #3; utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C -- Performance Testing.

D.3.4 Particulate Matter (PM)

In order to ensure compliance with condition D.3.1

(a) Collector #5 shall be in operation at all times the Mold Line #2 sand handling operation is in operation, in order to comply with this limit.

(b) Collector #6 shall be in operation at all times the shot blast #3 is in operation, in order to comply with this limit.

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

D.3.5 Visible Emissions Notations[40 CFR 64]

(a) Visible emission notations of the Mold Line #2 stack exhausts (ID Nos. S-5, S-6 and S-10) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(c) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.3.6 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across each of the three (3) dust collectors used in conjunction with Mold Line #2 and the dust collector for the four grinders, at least once per day when Mold Line #2 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across Collector #10 is outside the normal range of 3.0 to 10.0inches of water or a range established during the latest stack test; and Collector #5 is outside the normal range of 3.0 to 10.0 inches of water or a range established during the latest stack test; and Collector #6 is outside the normal range of 3.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response to Excursions and Exceedances, shall be considered a violation of this permit.

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

D.3.7 Broken or Failed Bag Detection [40 CFR 64]

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

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

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

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

D.3.8 Record Keeping Requirement

(a) To document the compliance with Condition D.3.5, the Permittee shall maintain a daily record of visible emission notations of the facilities' stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(b) To document the compliance with Condition D.3.6, the Permittee shall maintain daily records of the pressure drop across Dust Collector #5 controlling emissions from the Line #2 Sand and Line #2 Pouring/Cool; Dust Collector #6 controlling emissions from Shot blast #3, and the three grinders exhausting to S-6. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a nominal throughput of 5.1 tons of sand per hour with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(g) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a nominal throughput of 4.08 tons of sand per hour, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines ID West 321 Core Machine (constructed in 2012), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the West 321 Core Machine having a nominal throughput of 4.08 tons of sand per hour and each of the remaining five (5) core machines with a nominal throughput of 1.5 tons of sand per hour, all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

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

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

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

in order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the following conditions shall apply:

(a) The total resin usage for core machines CB-1 and CB-2 shall be less than 271,636 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. Total DMEA usage for core machines CB-1 and CB-2 shall be less than 36,218 pounds of DMEA per 12 consecutive month period with compliance determined at the end of each month.

(b) The total resin usage for core machines CB-3 and CB-4 shall be less than 271,636 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. DMEA usage for core machines CB-3 and CB-4 shall be less than 36,218 pounds of DMEA per 12 consecutive month period with compliance determined at the end of each month.

(c) The total resin usage for core machine CB-5 shall be less than 271,636 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. DMEA usage for core machine CB-5 shall be less than 36,218 pounds of DMEA per 12 consecutive month period with compliance determined at the end of each month.

(d) The total resin usage for the West 321 core machine shall be less than 271,636 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. DMEA usage for the West 321 core machine shall be less than 36,218 pounds of DMEA per 12 consecutive month period with compliance determined at the end of each month.

(e) The VOC emissions (not including DMEA) from core machines CB-1, CB-2, CB-3, CB-4, CB-5, and West 321 shall not exceed 0.05 pounds per pound of resin.

Compliance with these limits will render the requirements of 326 IAC 8-1-6 (BACT) not applicable. Compliance with these limits and Conditions D.2.1 and D.2.3 is also necessary to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.4.2 PSD Minor Limit [326 IAC 2-2]

The following limits have been established:

(a) PM and PM10 emissions from the North Core Sand Mixer shall be less than 1.40 and 0.54 pounds per hour, respectively;

(b) PM and PM10 emissions from the South Core Sand Mixer shall be less than 1.40 and 0.54 pounds per hour, respectively.

These limits, in addition to the PM and PM10 limits in condition D.2.1(a)(1) and (2), will insure that PM and PM10 emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line in 1993, per CP 065-2749-00007) do not exceed the PSD major modification thresholds of 25 and 15 tons per year, respectively.

(c) Emissions of PM and PM-10 from the one (1) sand mixer (ID New Core Sand Mixer), installed in 1995, shall be less than 5.68 and 3.40 pounds per hour, respectively. These limits will insure that PM and PM10 emissions do not exceed the PSD major modification thresholds of 25 tons per year for PM and 15 tons per year for PM10.

Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable.

D.4.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), the particulate matter emissions from the equipment listed above shall not exceed the pound per hour emission rate as given in the table below:

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)
North Core Sand Mixer	9.0	17.87
South Core Sand Mixer	9.0	17.87
New Core Sand Mixer	9.0	17.87

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

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

Compliance Determination Requirements

D.4.4 VOC Emissions

In order to ensure compliance with Conditions D.4.1 shall be demonstrated within 30 days of the end of each month based on the total resin and DMEA catalyst usage for the twelve (12) month period.

D.4.5 Particulate Matter (PM)

In order to ensure compliance Condition D.4.3 the three (3) dust collectors (ID Bin Vents 2, 3, and 4) shall be in operation and control emissions from the three (3) sand mixers at all times that the three (3) sand mixers are in operation.

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

D.4.6 Record Keeping Requirement

(a) To document compliance with Conditions D.4.1 (a), (b), (c) and (d), the Permittee shall maintain records of the DMEA and resin usages for each of core machines CB-1, CB-2, CB-3, CB-4, CB-5, and West 321 each month.

(b) To document compliance status with Condition D.4.1 (e), the Permittee shall maintain records to demonstrate there has been no change in the type of binder materials used for core machines CB-1, CB-2, CB-3, CB-4, CB-5, and West 321 each month.

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

D.4.7 Reporting Requirement

A quarterly summary of the information to document compliance status with Conditions D.4.1 (a), (b), (c), and (d) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Specifically Regulated Insignificant Activities

Operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including pneumatic conveying as follows:

(1) One (1) pneumatically conveyed core sand reclaim system with one (1) dust collector for particulate matter control, exhausting to the general ventilation. [326 IAC 6-3-2]

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

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

D.5.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the core sand reclaim system, an insignificant activity, shall not exceed 8.56 pounds per hour, when operating at a process weight rate of 6,000 pounds of sand per hour.

The pounds per hour limitation was calculated with the following equation:

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

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

Compliance Determination Requirements

D.5.2 Particulate Matter (PM)

To document compliance with Condition D.5.1 the dust collector for particulate matter control shall be in operation at all times that the core sand reclaim system is in operation.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(1) **Electric Induction Melt Furnaces**

four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(2) **Scrap Preheater**

one (1) natural gas-fired scrap preheater, constructed in 2012, with a maximum heat input of 9.16 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(3) **Pouring Operations**

one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

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

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.7760, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the affected facilities as specified in Table 1 of 40 CFR 63, Subpart EEEEE in accordance with schedule in 40 CFR 63 Subpart EEEEE.

E.1.2 Iron and Steel Foundries Requirements [40 CFR Part 63, Subpart EEEEE]

Pursuant to CFR Part 63, Subpart EEEEE, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart EEEEE (included as Attachment A), for the electric induction melt furnaces, scrap preheater, and pouring operation:

(1) 40 CFR 63.7680
(2) 40 CFR 63.7681
(3) 40 CFR 63.7682
(4) 40 CFR 63.7683
(5) 40 CFR 63.7690
(6) 40 CFR 63.7700
(7) 40 CFR 63.7710
(8) 40 CFR 63.7720
(9) 40 CFR 63.7730
(10) 40 CFR 63.7731
(11) 40 CFR 63.7732
(12) 40 CFR 63.7733

(13) 40 CFR 63.7734
(14) 40 CFR 63.7735
(15) 40 CFR 63.7736
(16) 40 CFR 63.7740
(17) 40 CFR 63.7741
(18) 40 CFR 63.7742
(19) 40 CFR 63.7743
(20) 40 CFR 63.7744
(21) 40 CFR 63.7745
(22) 40 CFR 63.7746
(23) 40 CFR 63.7747
(24) 40 CFR 63.7750
(25) 40 CFR 63.7751
(26) 40 CFR 63.7753
(27) 40 CFR 63.7760
(28) 40 CFR 63.7761
(29) 40 CFR 63.7765
(30) Appendix - Table 1 to Subpart EEEEE of Part 63

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Emergency engines as follows:

One (1) diesel emergency generator installed in 1998, rated at 73 horsepower. [40 CFR 63, Subpart ZZZZ].

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

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 20-1] [40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1-1, apply to one (1) diesel emergency generator, rated 73 horsepower except when otherwise specified in 40 CFR 63, Subpart ZZZZ.

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 63 Subpart ZZZZ, the Permittee shall comply with the provisions of 40 CFR 63 Subpart ZZZZ, which are incorporated as 326 IAC 20-82 for one (1) diesel emergency generator, rated 73 horsepower.

The diesel emergency generator subject to Subpart ZZZZ is shown below:

(1) 63.6585
(2) 63.6590(a)(1)(ii)
(3) 63.6595(a)
(4) 63.6602
(5) 63.6605
(6) 63.6625(e)(2)
(7) 63.6640(a),(b), and (f)(1)
(8) 63.6645(a)(5)
(9) 63.6655(e)(2)
(10) 63.6660
(11) 63.6665

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Grede LLC
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T 065-31928-00007

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Grede LLC
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T 065-31928-00007

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12) • The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and • The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Grede LLC
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, 47362
Part 70 Permit No.: T 065-31928-00007
Facility: Mold Line #1
Parameter: Metal Throughput
Limit: The maximum metal throughput to Mold Line #1 shall be limited to 76,572 tons per twelve (12) consecutive month period, rolled on a monthly basis

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Grede LLC - New Castle
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T 065-31928-00007
Facility: Core Machines CB-1, CB-2, CB-3, CB-4, CB-5, and West 321
Parameter: Resin and DMEA catalyst usage to limit VOC emissions to less than 25 tons/year.
Limits:

(a) The total resin usage for core machines CB-1 and CB-2 shall not exceed 271,636 pounds of resin per 12 consecutive month period. DMEA usage for core machines CB-1 and CB-2 shall not exceed 36,218 pounds of DMEA per 12 consecutive month period.

(b) The total resin usage for core machines CB-3 and CB-4 shall not exceed 271,636 pounds of resin per 12 consecutive month period. DMEA usage for core machines CB-3 and CB-4 shall not exceed 36,218 pounds of DMEA per 12 consecutive month period.

(c) The total resin usage for core machine CB-5 shall not exceed 271,636 pounds of resin per 12 consecutive month period. DMEA usage for core machine CB-5 shall not exceed 36,218 pounds of DMEA per 12 consecutive month period.

(d) The resin usage for the West 321 core machine shall not exceed 271,636 pounds of resin per 12 consecutive month period. DMEA usage for the West 321 core machine shall not exceed 36,218 pounds of DMEA per 12 consecutive month period.

YEAR: _____

Month	Core Machine ID	Column 1		Column 2		Column 1 + Column 2	
		Resin Usage This Month (lbs)	DMEA Catalyst Usage This Month (lbs)	Resin Usage for Previous 11 Months (lbs)	DMEA Catalyst Usage for Previous 11 Months (lbs)	12 Month Total Resin Usage (lbs)	12 Month Total DMEA Catalyst Usage (lbs)
	CB-1 & CB-2						
	CB-3 & CB-4						
	CB-5						
	West 321						
	CB-1 & CB-2						
	CB-3 & CB-4						
	CB-5						
	West 321						
	CB-1 & CB-2						
	CB-3 & CB-4						
	CB-5						
	West 321						

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Grede LLC
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T 065-31928-00007

Months: _____ to _____ Year: _____

Page 1 of 2

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attachment A

40 CFR 63, Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries

Source Name:	Grede Foundries, Inc
Source Location:	2700 East Plum Street, New Castle, IN 47362
County:	Henry
SIC Code:	3321
Significant Source Modification No.:	065-31928-00007
Permit Reviewer:	Anh Nguyen

SOURCE: 69 FR 21923, Apr. 22, 2004, unless otherwise noted.

Back to Top

What this Subpart Covers

Back to Top

§ 63.7680 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for iron and steel foundries. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart.

Back to Top

§ 63.7681 Am I subject to this subpart?

You are subject to this subpart if you own or operate an iron and steel foundry that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. Your iron and steel foundry is a major source of HAP for purposes of this subpart if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year or if it is located at a facility that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year as defined in § 63.2.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]

Back to Top

§ 63.7682 What parts of my foundry does this subpart cover?

(a) The affected source is each new or existing iron and steel foundry.

(b) This subpart covers emissions from metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines, automated shakeout lines, and mold and core making lines. This subpart also covers fugitive emissions from foundry operations.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source before December 23, 2002.

(d) An affected source is new if you commenced construction or reconstruction of the affected source on or after December 23, 2002. An affected source is reconstructed if it meets the definition of "reconstruction" in § 63.2.

Back to Top

§ 63.7683 When do I have to comply with this subpart?

(a) Except as specified in paragraph (b) of this section, if you have an existing affected source, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than April 23, 2007. Major source status for existing affected sources must be determined no later than April 23, 2007.

(b) If you have an existing affected source, you must comply with the work practice standards in § 63.7700(b) or (c), as applicable, no later than April 22, 2005.

(c) If you have a new affected source for which the initial startup date is on or before April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by April 22, 2004.

(d) If you have a new affected source for which the initial startup date is after April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(e) If your iron and steel foundry is an area source that becomes a major source of HAP, you must meet the requirements of § 63.6(c)(5).

(f) You must meet the notification and schedule requirements in § 63.7750. Note that several of these notifications must be submitted before the compliance date for your affected source.

Back to Top

Emissions Limitations

Back to Top

§ 63.7690 What emissions limitations must I meet?

(a) You must meet the emissions limits or standards in paragraphs (a)(1) through (11) of this section that apply to you. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for particulate matter (PM) in paragraph (a)(1)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(1)(ii) of this section:

(i) 0.005 grains of PM per dry standard cubic foot (gr/dscf), or

(ii) 0.0004 gr/dscf of total metal HAP.

(2) For each cupola metal melting furnace at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(2)(i) or (ii) of this section or, alternatively the limit for total metal HAP in paragraph (a)(2)(iii) or (iv) of this section:

(i) 0.006 gr/dscf of PM; or

(ii) 0.10 pound of PM per ton (lb/ton) of metal charged, or

(iii) 0.0005 gr/dscf of total metal HAP; or

(iv) 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(3)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(3)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(4)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(4)(ii) of this section:

(i) 0.001 gr/dscf of PM, or

(ii) 0.00008 gr/dscf of total metal HAP.

(5) For each pouring station at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(5)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(5)(ii) of this section:

(i) 0.010 gr/dscf of PM, or

(ii) 0.0008 gr/dscf of total metal HAP.

(6) For each pouring area or pouring station at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(6)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(6)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, you must not discharge any fugitive emissions to the atmosphere from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, you must not discharge emissions of volatile organic hazardous air pollutants (VOHAP) through a conveyance to the atmosphere that exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen.

(9) As an alternative to the work practice standard in § 63.7700(e) for a scrap preheater at an existing iron and steel foundry or in § 63.7700(f) for a scrap preheater at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed a flow-weighted average of 20 ppmv.

(11) For each triethylamine (TEA) cold box mold or core making line at a new or existing iron and steel foundry, you must meet either the emissions limit in paragraph (a)(11)(i) of this section or, alternatively the emissions standard in paragraph (a)(11)(ii) of this section:

(i) You must not discharge emissions of TEA through a conveyance to the atmosphere that exceed 1 ppmv, as determined according to the performance test procedures in § 63.7732(g); or

(ii) You must reduce emissions of TEA from each TEA cold box mold or core making line by at least 99 percent, as determined according to the performance test procedures in § 63.7732(g).

(b) You must meet each operating limit in paragraphs (b)(1) through (5) of this section that applies to you.

(1) You must install, operate, and maintain a capture and collection system for all emissions sources subject to an emissions limit for VOHAP or TEA in paragraphs (a)(8) through (11) of this section.

(i) Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(ii) You must operate each capture system at or above the lowest value or settings established as operating limits in your operation and maintenance plan.

(2) You must operate each wet scrubber applied to emissions from a metal melting furnace, scrap preheater, pouring area, or pouring station subject to an emissions limit for PM or total metal HAP in paragraphs (a)(1) through (6) of this section such that the 3-hour average pressure drop and scrubber water flow rate does not fall below the minimum levels established during the initial or subsequent performance test.

(3) You must operate each combustion device applied to emissions from a cupola metal melting furnace subject to the emissions limit for VOHAP in paragraph (a)(8) of this section, such that the 15-minute average combustion zone temperature does not fall below 1,300 degrees Fahrenheit ((°deg;F). Periods

when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.

(4) You must operate each combustion device applied to emissions from a scrap preheater subject to the emissions limit for VOHAP in paragraph (a)(9) of this section or from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section, such that the 3-hour average combustion zone temperature does not fall below the minimum level established during the initial or subsequent performance test.

(5) You must operate each wet acid scrubber applied to emissions from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section such that:

(i) The 3-hour average scrubbing liquid flow rate does not fall below the minimum level established during the initial or subsequent performance test; and

(ii) The 3-hour average pH of the scrubber blowdown, as measured by a continuous parameter monitoring system (CPMS), does not exceed 4.5 or the pH of the scrubber blowdown, as measured once every 8 hours during process operations, does not exceed 4.5.

(c) If you use a control device other than a baghouse, wet scrubber, wet acid scrubber, or combustion device, you must prepare and submit a monitoring plan containing the information listed in paragraphs (c)(1) through (5) of this section. The monitoring plan is subject to approval by the Administrator.

(1) A description of the device;

(2) Test results collected in accordance with § 63.7732 verifying the performance of the device for reducing emissions of PM, total metal HAP, VOHAP, or TEA to the levels required by this subpart;

(3) A copy of the operation and maintenance plan required by § 63.7710(b);

(4) A list of appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limitation(s); and

(5) Operating parameter limits based on monitoring data collected during the performance test.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]

Back to Top

Work Practice Standards

Back to Top

§ 63.7700 What work practice standards must I meet?

(a) For each segregated scrap storage area, bin or pile, you must either comply with the certification requirements in paragraph (b) of this section, or prepare and implement a plan for the selection and inspection of scrap according to the requirements in paragraph (c) of this section. You may have certain scrap subject to paragraph (b) of this section and other scrap subject to paragraph (c) of this section at your facility provided the scrap remains segregated until charge make-up.

(b) You must prepare and operate at all times according to a written certification that the foundry purchases and uses only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids. For the purpose of this paragraph (b), “free organic liquids” is defined as material that fails the paint filter test by EPA Method 9095A, “Paint Filter Liquids Test” (Revision 1, December 1996), as published in EPA Publication SW-846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (incorporated by reference—see § 63.14). Any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed and/or cleaned to the extent practicable such that the materials do not include lead components, mercury switches, chlorinated plastics, or free organic liquids can be included in this certification.

(c) You must prepare and operate at all times according to a written plan for the selection and inspection of iron and steel scrap to minimize, to the extent practicable, the amount of organics and HAP metals in the charge materials used by the iron and steel foundry. This scrap selection and inspection plan is subject to approval by the Administrator. You must keep a copy of the plan onsite and readily available to all plant personnel with materials acquisition or inspection duties. You must provide a copy of the material specifications to each of your scrap vendors. Each plan must include the information specified in paragraphs (c)(1) through (3) of this section.

(1) A materials acquisition program to limit organic contaminants according to the requirements in paragraph (c)(1)(i) or (ii) of this section, as applicable.

(i) For scrap charged to a scrap preheater, electric arc metal melting furnace, or electric induction metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, organic liquids, and a program to ensure the scrap materials are drained of free liquids; or

(ii) For scrap charged to a cupola metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastic, and a program to ensure the scrap materials are drained of free liquids.

(2) A materials acquisition program specifying that the scrap supplier remove accessible mercury switches from the trunks and hoods of any automotive bodies contained in the scrap and remove accessible lead components such as batteries and wheel weights. You must either obtain and maintain onsite a copy of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable, or document your attempts to obtain a copy of these procedures from the scrap suppliers servicing your area.

(3) Procedures for visual inspection of a representative portion, but not less than 10 percent, of all incoming scrap shipments to ensure the materials meet the specifications.

(i) The inspection procedures must identify the location(s) where inspections are to be performed for each type of shipment. Inspections may be performed at the scrap supplier's facility. The selected location(s) must provide a reasonable vantage point, considering worker safety, for visual inspection.

(ii) The inspection procedures must include recordkeeping requirements that document each visual inspection and the results.

(iii) The inspection procedures must include provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and limiting purchases from vendors whose shipments fail to meet specifications for more than three inspections in one calendar year.

(iv) If the inspections are performed at the scrap supplier's facility, the inspection procedures must include an explanation of how the periodic inspections ensure that not less than 10 percent of scrap purchased from each supplier is subject to inspection.

(d) For each furan warm box mold or core making line in a new or existing iron and steel foundry, you must use a binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation as determined by the Material Safety Data Sheet. This requirement does not apply to the resin portion of the binder system.

(e) For each scrap preheater at an existing iron and steel foundry, you must meet either the requirement in paragraph (e)(1) or (2) of this section. As an alternative to the requirement in paragraph (e)(1) or (2) of this section, you must meet the VOHAP emissions limit in § 63.7690(a)(9).

(1) You must operate and maintain a gas-fired preheater where the flame directly contacts the scrap charged; or

(2) You must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section.

(f) For each scrap preheater at a new iron and steel foundry, you must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section. As an alternative to this requirement, you must meet the VOHAP emissions limit in § 63.7690(a)(9).

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7218, Feb. 7, 2008]

Back to Top

Operation and Maintenance Requirements

Back to Top

§ 63.7710 What are my operation and maintenance requirements?

(a) As required by § 63.6(e)(1)(i), you must always operate and maintain your iron and steel foundry, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device for an emissions source subject to a PM, metal HAP, TEA, or VOHAP emissions limit in § 63.7690(a). Your operation and maintenance plan also must include procedures for igniting gases from mold vents in pouring areas and pouring stations that use a sand mold system. This operation and maintenance plan is subject to approval by the Administrator. Each plan must contain the elements described in paragraphs (b)(1) through (6) of this section.

(1) Monthly inspections of the equipment that is important to the performance of the total capture system (*i.e.,* pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.,* presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan must also include requirements to repair the defect or deficiency as soon as practicable.

(2) Operating limits for each capture system for an emissions source subject to an emissions limit or standard for VOHAP or TEA in § 63.7690(a)(8) through (11). You must establish the operating according to the requirements in paragraphs (b)(2)(i) through (iii) of this section.

(i) Select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you must use appropriate operating limit parameters that indicate the level of the ventilation draft and damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include, but are not limited to: volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage, or static pressure. Any parameter for damper position setting may be used that indicates the duct damper position related to the fully open setting.

(ii) For each operating limit parameter selected in paragraph (b)(2)(i) of this section, designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate (*i.e.,* the operating limits with one furnace melting, two melting, as applicable to your plant).

(iii) Include documentation in your plan to support your selection of the operating limits established for your capture system. This documentation must include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of § 63.7740(a), and the data used to set the value or setting for the parameter for each of your process configurations.

(3) Preventative maintenance plan for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(4) A site-specific monitoring plan for each bag leak detection system. For each bag leak detection system that operates on the triboelectric effect, the monitoring plan must be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document “Fabric Filter Bag Leak Detection Guidance” (EPA-454/R-98-015). This baghouse monitoring plan is subject to approval by the Administrator. The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all of the items identified in paragraphs (b)(4)(i) through (v) of this section.

(i) Installation of the bag leak detection system.

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

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

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

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

(5) Corrective action plan for each baghouse. The plan must include the requirement that, in the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24

hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions taken may include, but are not limited to:

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

(ii) Sealing off defective bags or filter media.

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

(iv) Sealing off a defective baghouse compartment.

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

(vi) Making process changes.

(vii) Shutting down the process producing the PM emissions.

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

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

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

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, Feb. 7, 2008]

Back to Top

General Compliance Requirements

Back to Top

§ 63.7720 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, or malfunction.

(b) During the period between the compliance date specified for your iron and steel foundry in § 63.7683 and the date when applicable operating limits have been established during the initial performance test,

you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3). The startup, shutdown, and malfunction plan also must specify what constitutes a shutdown of a cupola and how to determine that operating conditions are normal following startup of a cupola.

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

Back to Top

Initial Compliance Requirements

Back to Top

§ 63.7730 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) As required by § 63.7(a)(2), you must conduct a performance test no later than 180 calendar days after the compliance date that is specified in § 63.7683 for your iron and steel foundry to demonstrate initial compliance with each emissions limitation in § 63.7690 that applies to you.

(b) For each work practice standard in § 63.7700 and each operation and maintenance requirement in § 63.7710 that applies to you where initial compliance is not demonstrated using a performance test, you must demonstrate initial compliance no later than 30 calendar days after the compliance date that is specified for your iron and steel foundry in § 63.7683.

(c) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, you must demonstrate initial compliance with either the proposed emissions limit or the promulgated emissions limit no later than October 19, 2004 or no later than 180 calendar days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, and you chose to comply with the proposed emissions limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emissions limit by October 19, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

Back to Top

§ 63.7731 When must I conduct subsequent performance tests?

(a) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP, VOHAP, and TEA emissions limitations in § 63.7690 for your iron and steel foundry no less frequently than every 5 years and each time you elect to change an operating limit or to comply with a different alternative emissions limit, if applicable. The requirement to conduct performance tests every 5 years does not apply to an emissions source for which a continuous emissions monitoring system (CEMS) is used to demonstrate continuous compliance.

(b) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in § 63.7690(a)(7) for your iron and steel foundry no less frequently than once every 6 months.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, Feb. 7, 2008]

Back to Top

§ 63.7732 What test methods and other procedures must I use to demonstrate initial compliance with the emissions limitations?

(a) You must conduct each performance test that applies to your iron and steel foundry based on your selected compliance alternative, if applicable, according to the requirements in § 63.7(e)(1) and the conditions specified in paragraphs (b) through (i) of this section.

(b) To determine compliance with the applicable emissions limit for PM in § 63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (b)(1) through (6) of this section.

(1) Determine the concentration of PM according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5B, 5D, 5F, or 5I, as applicable, to determine the PM concentration. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch.

(2) Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater. For a cupola metal melting furnace at an existing iron and steel foundry that is subject to the PM emissions limit in § 63.7690(a)(ii), calculate the PM emissions rate in pounds of PM per ton (lb/ton) of metal charged using Equation 1 of this section:

$$EF_{PM} = C_{PM} \times \left(\frac{Q}{M_{charge}}\right) \times \left(\frac{t_{test}}{7{,}000}\right) \qquad \text{(Eq.1)}$$

Where:

EF_{PM} = Mass emissions rate of PM, pounds of PM per ton (lb/ton) of metal charged;

C_{PM} = Concentration of PM measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per minute (dscfm);

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and

7,000 = Unit conversion factor, grains per pound (gr/lb).

(c) To determine compliance with the applicable emissions limit for total metal HAP in § 63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (c)(1) through (6) of this section.

(1) Determine the concentration of total metal HAP according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (c)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 29 to determine the total metal HAP concentration.

(2) A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater during each performance test run and calculate the total metal HAP emissions rate (pounds of total metal HAP per ton (lb/ton) of metal charged) using Equation 2 of this section:

$$EF_{TMHAP} = C_{TMHAP} \times \left(\frac{Q}{M_{charge}}\right) \times \left(\frac{t_{test}}{7{,}000}\right) \qquad \text{(Eq. 2)}$$

Where:

EF_{TMHAP} = Emissions rate of total metal HAP, pounds of total metal HAP per ton (lb/ton) of metal charged;

C_{TMHAP} = Concentration of total metal HAP measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dscfm;

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and

7,000 = Unit conversion factor, gr/lb.

(d) To determine compliance with the opacity limit in § 63.7690(a)(7) for fugitive emissions from buildings or structures housing any iron and steel foundry emissions source at the iron and steel foundry, follow the procedures in paragraphs (d)(1) and (2) of this section.

(1) Using a certified observer, conduct each opacity test according to the requirements in EPA Method 9 (40 CFR part 60, appendix A) and § 63.6(h)(5). The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.

(2) During testing intervals when PM performance tests, if applicable, are being conducted, conduct the opacity test such the opacity observations are recorded during the PM performance tests.

(e) To determine compliance with the applicable VOHAP emissions limit in § 63.7690(a)(8) for a cupola metal melting furnace or in § 63.7690(a)(9) for a scrap preheater, follow the test methods and procedures in paragraphs (e)(1) through (4) of this section.

(1) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of total gaseous nonmethane organics (TGNMO) or Method 25A to determine the concentration of total organic compounds (TOC), using hexane as the calibration gas.

(2) Determine the average VOHAP, TGNMO, or TOC concentration using a minimum of three valid test runs. Each test run must include a minimum of 60 continuous operating minutes.

(3) For a cupola metal melting furnace, correct the measured concentration of VOHAP, TGNMO, or TOC for oxygen content in the gas stream using Equation 3 of this section:

$$EF_{TMHAP} = C_{TMHAP} \times \left(\frac{Q}{M_{charge}}\right) \times \left(\frac{t_{test}}{7{,}000}\right) \qquad \text{(Eq. 2)}$$

Where:

C_{VOHAP} = Concentration of VOHAP in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the concentration of TGNMO or TOC in ppmv as hexane as measured by Method 25 or 25A in 40 CFR part 60, appendix A; and

$\%O_2$ = Oxygen concentration in gas stream, percent by volume (dry basis).

(4) For a cupola metal melting furnace, measure the combustion zone temperature of the combustion device with the CPMS required in § 63.7740(d) during each sampling run in 15-minute intervals. Determine and record the 15-minute average of the three runs.

(f) Follow the applicable procedures in paragraphs (f)(1) through (3) of this section to determine compliance with the VOHAP emissions limit in § 63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines.

(1) Follow these procedures to demonstrate compliance by direct measurement of total hydrocarbons (a surrogate for VOHAP) using a volatile organic compound (VOC) CEMS.

(i) Using the VOC CEMS required in § 63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) for 180 continuous operating minutes. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Reduce the monitoring data to hourly averages as specified in § 63.8(g)(2).

(iii) Compute and record the 3-hour average of the monitoring data.

(2) As an alternative to the procedures in paragraph (f)(1) of this section, you may demonstrate compliance with the VOHAP emissions limit in § 63.7690(a)(10) by establishing a site-specific TOC emissions limit that is correlated to the VOHAP emissions limit according to the procedures in paragraph (f)(2)(i) through (ix) of this section.

(i) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraph (f)(2)(ii) through (vi) of this section.

(ii) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(iii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iv) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(v) Method 4 to determine the moisture content of the stack gas.

(vi) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of TGNMO using hexane as the calibration gas.

(vii) Using the CEMS required in § 63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) during each of the Method 18 (or Method 25) sampling runs. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(viii) Calculate the average VOHAP (or TGNMO) concentration for the source test as the arithmetic average of the concentrations measured for the individual test runs, and determine the average concentration of total hydrocarbon (as hexane) as measured by the CEMS during all test runs.

(ix) Calculate the site-specific VOC emissions limit using Equation 4 of this section:

$$VOC_{limit} = 20 \times \frac{C_{VOHAP,avg}}{C_{CEM}} \qquad \text{(Eq. 4)}$$

Where:

$C_{VOHAP,avg}$ = Average concentration of VOHAP for the source test in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the average concentration of TGNMO for the source test in ppmv as hexane as measured by Method 25 in 40 CFR part 60, appendix A; and

C_{CEM} = Average concentration of total hydrocarbons in ppmv as hexane as measured using the CEMS during the source test.

(3) For two or more exhaust streams from one or more automated conveyor and pallet cooling lines or automated shakeout lines, compute the flow-weighted average concentration of VOHAP emissions for each combination of exhaust streams using Equation 5 of this section:

$$C_w = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i} \qquad \text{(Eq. 5)}$$

Where:

C_w = Flow-weighted concentration of VOHAP or VOC, ppmv (as hexane);

C_i = Concentration of VOHAP or VOC from exhaust stream “i”, ppmv (as hexane);

n = Number of exhaust streams sampled; and

Q_i = Volumetric flow rate of effluent gas from exhaust stream “i,”, dscfm.

(g) To determine compliance with the emissions limit or standard in § 63.7690(a)(11) for a TEA cold box mold or core making line, follow the test methods in 40 CFR part 60, appendix A, specified in paragraphs (g)(1) through (4) of this section.

(1) Determine the TEA concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (g)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. If you elect to meet the 99 percent reduction standard, sampling sites must be located both at the inlet to the control device and at the outlet of the control device prior to any releases to the atmosphere. If you elect to meet the concentration limit, the sampling site must be located at the outlet of the control

device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the TEA concentration. Alternatively, you may use NIOSH Method 2010 (incorporated by reference—see § 63.14) to determine the TEA concentration provided the performance requirements outlined in section 13.1 of EPA Method 18 are satisfied. The sampling option and time must be sufficiently long such that either the TEA concentration in the field sample is at least 5 times the limit of detection for the analytical method or the test results calculated using the laboratory's reported analytical detection limit for the specific field samples are less than ⅕ of the applicable emissions limit. When using Method 18, the adsorbent tube approach, as described in section 8.2.4 of Method 18, may be required to achieve the necessary analytical detection limits. The sampling time must be at least 1 hour in all cases.

(2) If you use a wet acid scrubber, conduct the test as soon as practicable after adding fresh acid solution and the system has reached normal operating conditions.

(3) If you use a wet acid scrubber that is subject to the operating limit in § 63.7690(b)(5)(ii) for pH level, determine the pH of the scrubber blowdown using the procedures in paragraph (g)(3)(i) or (ii) of this section.

(i) Measure the pH of the scrubber blowdown with the CPMS required in § 63.7740(f)(2) during each TEA sampling run in intervals of no more than 15 minutes. Determine and record the 3-hour average; or

(ii) Measure and record the pH level using the probe and meter required in § 63.7740(f)(2) once each sampling run. Determine and record the average pH level for the three runs.

(4) If you are subject to the 99 percent reduction standard, calculate the mass emissions reduction using Equation 6 of this section:

$$\%\,\text{reduction} = \frac{E_i - E_o}{E_i} \times 100\% \qquad \text{(Eq. 6)}$$

Where:

E_i = Mass emissions rate of TEA at control device inlet, kilograms per hour (kg/hr); and

E_o = Mass emissions rate of TEA at control device outlet, kg/hr.

(h) To determine compliance with the PM or total metal HAP emissions limits in § 63.7690(a)(1) through (6) when one or more regulated emissions sources are combined with either another regulated emissions source subject to a different emissions limit or other non-regulated emissions sources, you may demonstrate compliance using one of the procedures in paragraphs (h)(1) through (3) of this section.

(1) Meet the most stringent applicable emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(2) Use the procedures in paragraphs (h)(2)(i) through (iii) of this section.

(i) Determine the volumetric flow rate of the individual regulated streams for which emissions limits apply.

(ii) Calculate the flow-weighted average emissions limit, considering only the regulated streams, using Equation 5 of this section, except C_w is the flow-weighted average emissions limit for PM or total metal HAP in the exhaust stream, gr/dscf; and C_i is the concentration of PM or total metal HAP in exhaust stream "i", gr/dscf.

(iii) Meet the calculated flow-weighted average emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(3) Use the procedures in paragraphs (h)(3)(i) through (iii) of this section.

(i) Determine the PM or total metal HAP concentration of each of the regulated streams prior to the combination with other exhaust streams or control device.

(ii) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 6 of this section, except E_i is the mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr and E_o is the mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(iii) Meet the applicable emissions limit based on the calculated PM or total metal HAP concentration for the regulated emissions sources using Equation 7 of this section:

$$C_{released} = C_i \times \left(1 - \frac{\%\,reduction}{100}\right) \qquad \text{(Eq. 7)}$$

Where:

$C_{released}$ = Calculated concentration of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, gr/dscf; and

C_i = Concentration of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, gr/dscf.

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

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, Feb. 7, 2008]

Back to Top

§ 63.7733 What procedures must I use to establish operating limits?

(a) For each capture system subject to operating limits in § 63.7690(b)(1)(ii), you must establish site-specific operating limits in your operation and maintenance plan according to the procedures in paragraphs (a)(1) through (3) of this section.

(1) Concurrent with applicable emissions and opacity tests, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements in § 63.7740(a).

(2) For any dampers that are manually set and remain at the same position at all times the capture system is operating, the damper position must be visually checked and recorded at the beginning and end of each run.

(3) Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.

(b) For each wet scrubber subject to the operating limits in § 63.7690(b)(2) for pressure drop and scrubber water flow rate, you must establish site-specific operating limits according to the procedures specified in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7740(c), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM test run.

(2) Compute and record the average pressure drop and average scrubber water flow rate for each valid sampling run in which the applicable emissions limit is met.

(c) For each combustion device applied to emissions from a scrap preheater or TEA cold box mold or core making line subject to the operating limit in § 63.7690(b)(4) for combustion zone temperature, you must establish a site-specific operating limit according to the procedures specified in paragraphs (c)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7740(e), measure and record the combustion zone temperature during each sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average combustion zone temperature for each valid sampling run in which the applicable emissions limit is met.

(d) For each acid wet scrubber subject to the operating limit in § 63.7690(b)(5), you must establish a site-specific operating limit for scrubbing liquid flow rate according to the procedures specified in paragraphs (d)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7740(f), measure and record the scrubbing liquid flow rate during each TEA sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average scrubbing liquid flow rate for each valid sampling run in which the applicable emissions limit is met.

(e) You may change the operating limits for a capture system, wet scrubber, acid wet scrubber, or combustion device if you meet the requirements in paragraphs (e)(1) through (3) of this section.

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

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in § 63.7690.

(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) through (d) of this section.

(f) You may use a previous performance test (conducted since December 22, 2002) to establish an operating limit provided the test meets the requirements of this subpart.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

Back to Top

§ 63.7734 How do I demonstrate initial compliance with the emissions limitations that apply to me?

(a) You have demonstrated initial compliance with the emissions limits in § 63.7690(a) by meeting the applicable conditions in paragraphs (a)(1) through (11) of this section. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.005 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.006 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0005 gr/dscf; or

(iii) The average PM mass emissions rate, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) The average total metal HAP mass emissions rate, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(b), did not exceed 0.001 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in § 63.7732(b), did not exceed 0.010 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in § 63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in § 63.7732(c), did not exceed 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, the opacity of fugitive emissions from foundry operations discharged to the atmosphere, determined according to the performance test procedures in § 63.7732(d), did not exceed 20 percent (6-minute average), except for one 6-minute average per hour that did not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, the average VOHAP concentration, determined according to the performance test procedures in § 63.7732(e), did not exceed 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing iron and steel foundry that does not meet the work practice standards in § 63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not meet the work practice standard in § 63.7700(f), the average VOHAP concentration determined according to the performance test procedures in § 63.7732(e), did not exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new foundry,

(i) You have reduced the data from the CEMS to 3-hour averages according to the performance test procedures in § 63.7732(f)(1) or (2); and

(ii) The 3-hour flow-weighted average VOHAP concentration, measured according to the performance test procedures in § 63.7332(f)(1) or (2), did not exceed 20 ppmv.

(11) For each TEA cold box mold or core making line in a new or existing iron and steel foundry, the average TEA concentration, determined according to the performance test procedures in § 63.7732(g), did not exceed 1 ppmv or was reduced by 99 percent.

(b) You have demonstrated initial compliance with the operating limits in § 63.7690(b) if:

(1) For each capture system subject to the operating limit in § 63.7690(b)(1)(ii),

(i) You have established appropriate site-specific operating limits in your operation and maintenance plan according to the requirements in § 63.7710(b); and

(ii) You have a record of the operating parameter data measured during the performance test in accordance with § 63.7733(a); and

(2) For each wet scrubber subject to the operating limits in § 63.7690(b)(2) for pressure drop and scrubber water flow rate, you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with § 63.7733(b).

(3) For each combustion device subject to the operating limit in § 63.7690(b)(3) for combustion zone temperature, you have a record of the combustion zone temperature measured during the performance test in accordance with § 63.7732(e)(4).

(4) For each combustion device subject to the operating limit in § 63.7690(b)(4) for combustion zone temperature, you have established appropriate site-specific operating limits and have a record of the combustion zone temperature measured during the performance test in accordance with § 63.7733(c).

(5) For each acid wet scrubber subject to the operating limits in § 63.7690(b)(5) for scrubbing liquid flow rate and scrubber blowdown pH,

(i) You have established appropriate site-specific operating limits for the scrubbing liquid flow rate and have a record of the scrubbing liquid flow rate measured during the performance test in accordance with § 63.7733(d); and

(ii) You have a record of the pH of the scrubbing liquid blowdown measured during the performance test in accordance with § 63.7732(g)(3).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

Back to Top

§ 63.7735 How do I demonstrate initial compliance with the work practice standards that apply to me?

(a) For each iron and steel foundry subject to the certification requirement in § 63.7700(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that: “At all times, your foundry will purchase and use only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids.”

(b) For each iron and steel foundry subject to the requirements in § 63.7700(c) for a scrap inspection and selection plan, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted a written plan to the Administrator for approval according to the requirements in § 63.7700(c); and

(2) You will operate at all times according to the plan requirements.

(c) For each furan warm box mold or core making line in a new or existing foundry subject to the work practice standard in § 63.7700(d), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You will meet the no methanol requirement for the catalyst portion of each binder chemical formulation; and

(2) You have records documenting your certification of compliance, such as a material safety data sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet, onsite and available for inspection.

(d) For each scrap preheater at an existing iron and steel foundry subject to the work practice standard in § 63.7700(e)(1) or (2), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have installed a gas-fired preheater where the flame directly contacts the scrap charged, you will operate and maintain each gas-fired scrap preheater such that the flame directly contacts the scrap charged, and you have records documenting your certification of compliance that are onsite and available for inspection; or

(2) You will charge only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

(e) For each scrap preheater at a new iron and steel foundry subject to the work practice standard in § 63.7700(f), you have demonstrated initial compliance if you have certified in your notification of compliance status that you will charge only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005]

Back to Top

§ 63.7736 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system subject to an operating limit in § 63.7690(b), you have demonstrated initial compliance if you have met the conditions in paragraphs (a)(1) and (2) of this section.

(1) You have certified in your notification of compliance status that:

(i) You have submitted the capture system operation and maintenance plan to the Administrator for approval according to the requirements of § 63.7710(b); and

(ii) You will inspect, operate, and maintain each capture system according to the procedures in the plan.

(2) You have certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan.

(b) For each control device subject to an operating limit in § 63.7690(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the control device operation and maintenance plan to the Administrator for approval according to the requirements of § 63.7710(b); and

(2) You will inspect, operate, and maintain each control device according to the procedures in the plan.

(c) For each bag leak detection system, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the bag leak detection system monitoring information to the Administrator within the written O&M plan for approval according to the requirements of § 63.7710(b);

(2) You will inspect, operate, and maintain each bag leak detection system according to the procedures in the plan; and

(3) You will follow the corrective action procedures for bag leak detection system alarms according to the requirements in the plan.

(d) For each pouring area and pouring station in a new or existing foundry, you have demonstrated initial compliance if you have certified in your notification of compliance status report that:

(1) You have submitted the mold vent ignition plan to the Administrator for approval according to the requirements in § 63.7710(b); and

(2) You will follow the procedures for igniting mold vent gases according to the requirements in the plan.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

Back to Top

Continuous Compliance Requirements

Back to Top

§ 63.7740 What are my monitoring requirements?

(a) For each capture system subject to an operating limit in § 63.7690(b)(1), you must install, operate, and maintain a CPMS according to the requirements in § 63.7741(a) and the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you use a flow measurement device to monitor the operating limit parameter, you must at all times monitor the hourly average rate (*e.g.,* the hourly average actual volumetric flow rate through each separately ducted hood or the average hourly total volumetric flow rate at the inlet to the control device).

(2) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must at all times monitor the relative change in PM loadings using a bag leak detection system according to the requirements in § 63.7741(b).

(c) For each baghouse, regardless of type, that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must conduct inspections at their specified frequencies according to the requirements specified in paragraphs (c)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulse-jet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspections or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or lying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(d) For each wet scrubber subject to the operating limits in § 63.7690(b)(2), you must at all times monitor the 3-hour average pressure drop and scrubber water flow rate using CPMS according to the requirements in § 63.7741(c).

(e) For each combustion device subject to the operating limit in § 63.7690(b)(3), you must at all times monitor the 15-minute average combustion zone temperature using a CPMS according to the requirements of § 63.7741(d).

(f) For each combustion device subject to the operating limit in § 63.7690(b)(4), you must at all times monitor the 3-hour average combustion zone temperature using CPMS according to the requirements in § 63.7741(d).

(g) For each wet acid scrubber subject to the operating limits in § 63.7690(b)(5),

(1) You must at all times monitor the 3-hour average scrubbing liquid flow rate using CPMS according to the requirements of § 63.7741(e)(1); and

(2) You must at all times monitor the 3-hour average pH of the scrubber blowdown using CPMS according to the requirements in § 63.7741(e)(2) or measure and record the pH of the scrubber blowdown once per production cycle using a pH probe and meter according to the requirements in § 63.7741(e)(3).

(h) For one or more automated conveyor and pallet cooling lines and automated shakeout lines at a new iron and steel foundry subject to the VOHAP emissions limit in § 63.7690(a)(10), you must at all times monitor the 3-hour average VOHAP concentration using a CEMS according to the requirements of § 63.7741(g).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

Back to Top

§ 63.7741 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each capture system subject to an operating limit in § 63.7690(b)(1), you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a)(1) through (3) of this section.

(1) If you use a flow measurement device to monitor an operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(1)(i) through (iv) of this section.

(i) Locate the flow sensor and other necessary equipment such as straightening vanes in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) If you use a pressure measurement device to monitor the operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(2)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close as possible to a position that provides a representative measurement of the pressure and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a “non-clogging” pressure tap is used, check for pluggage monthly.

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) Record the results of each inspection, calibration, and validation check.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must install, operate,

and maintain a bag leak detection system according to the requirements in paragraphs (b)(1) through (7) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

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

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

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

(5) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time without approval from the Administrator. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the operation and maintenance plan required by § 63.7710(b).

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

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

(c) For each wet scrubber subject to the operating limits in § 63.7690(b)(2), you must install and maintain CPMS to measure and record the pressure drop and scrubber water flow rate according to the requirements in paragraphs (c)(1) and (2) of this section.

(1) For each CPMS for pressure drop you must:

(i) Locate the pressure sensor in or as close as possible to a position that provides a representative measurement of the pressure drop and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a “non-clogging” pressure tap is used, check for pluggage monthly.

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) For each CPMS for scrubber liquid flow rate, you must:

(i) Locate the flow sensor and other necessary equipment in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually according to the manufacturer's instructions.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(d) For each combustion device subject to the operating limit in § 63.7690(b)(3) or (4), you must install and maintain a CPMS to measure and record the combustion zone temperature according to the requirements in paragraphs (d)(1) through (8) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) For a noncryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 0.75 percent of the temperature value, whichever is larger.

(3) For a cryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 2 percent of the temperature value, whichever is larger.

(4) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(5) If you use a chart recorder, it must have a sensitivity in the minor division of at least 20 °F.

(6) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check, in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 16.7 °C of the process temperature sensor's reading.

(7) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range, or install a new temperature sensor.

(8) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(e) For each wet acid scrubber subject to the operating limits in § 63.7690(b)(5), you must:

(1) Install and maintain CPMS to measure and record the scrubbing liquid flow rate according to the requirements in paragraph (c)(2) of this section; and

(2) Install and maintain CPMS to measure and record the pH of the scrubber blowdown according to the requirements in paragraph (e)(2)(i) through (iv) of this section.

(i) Locate the pH sensor in a position that provides a representative measurement of the pH and that minimizes or eliminates internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.1 pH or a transducer with a minimum measurement sensitivity of 5 percent of the pH range.

(iii) Check gauge calibration quarterly and transducer calibration monthly using a manual pH gauge.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) As an alternative to the CPMS required in paragraph (e)(2) of this section, you may use a pH probe to extract a sample for analysis by a pH meter that meets the requirements in paragraphs (e)(3)(i) through (iii) of this section.

(i) The pH meter must have a range of at least 1 to 5 or more;

(ii) The pH meter must have an accuracy of ±0.1; and

(iii) The pH meter must have a resolution of at least 0.1 pH.

(f) You must operate each CPMS used to meet the requirements of this subpart according to the requirements specified in paragraphs (f)(1) through (3) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of three of the required four data points to constitute a valid hour of data.

(2) Each CPMS must have valid hourly data for 100 percent of every averaging period.

(3) Each CPMS must determine and record the hourly average of all recorded readings and the 3-hour average of all recorded readings.

(g) For each automated conveyor and pallet cooling line and automated shakeout line at a new iron and steel foundry subject to the VOHAP emissions limit in § 63.7690(a)(10), you must install, operate, and maintain a CEMS to measure and record the concentration of VOHAP emissions according to the requirements in paragraphs (g)(1) through (3) of this section.

(1) You must install, operate, and maintain each CEMS according to Performance Specification 8 in 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each CEMS according to the requirements of § 63.8 and Performance Specification 8 in 40 CFR part 60, appendix B.

(3) You must operate each CEMS according to the requirements specified in paragraph (g)(3)(i) through (iv) of this section.

(i) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(ii) You must reduce CEMS data as specified in § 63.8(g)(2).

(iii) Each CEMS must determine and record the 3-hour average emissions using all the hourly averages collected for periods during which the CEMS is not out-of-control.

(iv) Record the results of each inspection, calibration, and validation check.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, Feb. 7, 2008]

Back to Top

§ 63.7742 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) any time a source of emissions is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emissions or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Back to Top

§ 63.7743 How do I demonstrate continuous compliance with the emissions limitations that apply to me?

(a) You must demonstrate continuous compliance by meeting the applicable conditions in paragraphs (a)(1) through (12) of this section. When alternative emissions limitations are provided for a given emissions source, you must comply with the alternative emissions limitation most recently selected as your compliance alternative.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.005 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.006 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0005 gr/dscf; or

(iii) Maintaining the average PM mass emissions rate at or below 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) Maintaining the average total metal HAP mass emissions rate at or below 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at new iron and steel foundry, (i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.001 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.010 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, maintaining the opacity of any fugitive emissions from foundry operations discharged to the atmosphere at or below 20 percent opacity (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing new iron and steel foundry that does not comply with the work practice standard in § 63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not comply with the work practice standard in § 63.7700(f), maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines or automated shakeout lines that use a sand mold system at a new iron and steel foundry,

(i) Maintaining the 3-hour flow-weighted average VOHAP concentration in the exhaust stream at or below 20 ppmv;

(ii) Inspecting and maintaining each CEMS according to the requirements of § 63.7741(g) and recording all information needed to document conformance with these requirements; and

(iii) Collecting and reducing monitoring data for according to the requirements of § 63.7741(g) and recording all information needed to document conformance with these requirements.

(11) For each TEA cold box mold or core making line at a new or existing iron and steel foundry, maintaining a 99 percent reduction in the VOHAP concentration in the exhaust stream or maintaining the average VOHAP concentration in the exhaust stream at or below 1 ppmv.

(12) Conducting subsequent performance tests at least every 5 years for each emissions source subject to an emissions limit for PM, total metal HAP, VOHAP, or TEA in § 63.7690(a) and subsequent performance tests at least every 6 months for each building or structure subject to the opacity limit in § 63.7690(a)(7).

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in § 63.7690(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(1) Operating the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitoring the capture system according to the requirements in § 63.7740(a) and collecting, reducing, and recording the monitoring data for each of the operating limit parameters according to the applicable requirements in this subpart.

(c) For each baghouse,

(1) Inspecting and maintaining each baghouse according to the requirements of § 63.7740(c)(1) through (8) and recording all information needed to document conformance with these requirements; and

(2) If the baghouse is equipped with a bag leak detection system, maintaining records of the times the bag leak detection system sounded, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(d) For each wet scrubber that is subject to the operating limits in § 63.7690(b)(2), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average pressure drop and 3-hour average scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(c) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements.

(e) For each combustion device that is subject to the operating limit in § 63.7690(b)(3), you must demonstrate continuous compliance by:

(1) Maintaining the 15-minute average combustion zone temperature at a level no lower than 1,300 °F;

(2) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements.

(f) For each combustion device that is subject to the operating limit in § 63.7690(b)(4), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average combustion zone temperature at a level no lower that established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements.

(g) For each acid wet scrubber subject to the operating limits in § 63.7690(b)(5), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average scrubbing liquid flow rate at a level no lower than the level established during the initial or subsequent performance test;

(2) Maintaining the 3-hour average pH of the scrubber blowdown at a level no higher than 4.5 (if measured by a CPMS) or maintaining the pH level of the scrubber blowdown during each production shift no higher than 4.5;

(3) Inspecting and maintaining each CPMS according to the requirements of § 63.7741(e) and recording all information needed to document conformance with these requirements; and

(4) Collecting and reducing monitoring data for scrubbing liquid flow rate and scrubber blowdown pH according to the requirements of § 63.7741(f) and recording all information needed to document conformance with these requirements. If the pH level of the scrubber blowdown is measured by a probe and meter, you must demonstrate continuous compliance by maintaining records that document the date, time, and results of each sample taken for each production shift.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

Back to Top

§ 63.7744 How do I demonstrate continuous compliance with the work practice standards that apply to me?

(a) You must maintain records that document continuous compliance with the certification requirements in § 63.7700(b) or with the procedures in your scrap selection and inspection plan required in § 63.7700(c). Your records documenting compliance with the scrap selection and inspection plan must include a copy

(kept onsite) of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.

(b) You must keep records of the chemical composition of all catalyst binder formulations applied in each furan warm box mold or core making line at a new or existing iron and steel foundry to demonstrate continuous compliance with the requirements in § 63.7700(d).

(c) For a scrap preheater at an existing iron and steel foundry, you must operate and maintain each gas-fired preheater such that the flame directly contacts the scrap charged to demonstrate continuous compliance with the requirement § 63.7700(e)(1). If you choose to meet the work practice standard in § 63.7700(e)(2), you must keep records to document that the scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b).

(d) For a scrap preheater at a new iron and steel foundry, you must keep records to document that each scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in § 63.7700(b) to demonstrate continuous compliance with the requirement in § 63.7700(f).

Back to Top

§ 63.7745 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system and control device for an emissions source subject to an emissions limit in § 63.7690(a), you must demonstrate continuous compliance with the operation and maintenance requirements of § 63.7710 by:

(1) Making monthly inspections of capture systems and initiating corrective action according to § 63.7710(b)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance for each control device according to the preventive maintenance plan required by § 63.7710(b)(3) and recording all information needed to document conformance with these requirements;

(3) Operating and maintaining each bag leak detection system according to the site-specific monitoring plan required by § 63.7710(b)(4) and recording all information needed to demonstrate conformance with these requirements;

(4) Initiating and completing corrective action for a bag leak detection system alarm according to the corrective action plan required by § 63.7710(b)(5) and recording all information needed to document conformance with these requirements; and

(5) Igniting gases from mold vents according to the procedures in the plan required by § 63.7710(b)(6). (Any instance where you fail to follow the procedures is a deviation that must be included in your semiannual compliance report.)

(b) You must maintain a current copy of the operation and maintenance plans required by § 63.7710(b) onsite and available for inspection upon request. You must keep the plans for the life of the iron and steel foundry or until the iron and steel foundry is no longer subject to the requirements of this subpart.

Back to Top

§ 63.7746 What other requirements must I meet to demonstrate continuous compliance?

(a) *Deviations.* You must report each instance in which you did not meet each emissions limitation in § 63.7690 (including each operating limit) that applies to you. This requirement includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet each work practice standard in § 63.7700 and each operation and maintenance requirement of § 63.7710 that applies to you. These instances are deviations from the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements of § 63.7751.

(b) *Startups, shutdowns, and malfunctions.* (1) Consistent with the requirements of §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations according to the provisions in § 63.6(e).

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

Back to Top

§ 63.7747 How do I apply for alternative monitoring requirements for a continuous emissions monitoring system?

(a) You may request an alternative monitoring method to demonstrate compliance with the VOHAP emissions limits in § 63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines at a new iron and steel foundry according to the procedures in this section.

(b) You can request approval to use an alternative monitoring method in the notification of construction or reconstruction for new sources, or at any time.

(c) You must submit a monitoring plan that includes a description of the control technique or pollution prevention technique, a description of the continuous monitoring system or method including appropriate operating parameters that will be monitored, test results demonstrating compliance with the emissions limit, operating limit(s) (if applicable) determined according to the test results, and the frequency of measuring and recording to establish continuous compliance. If applicable, you must also include operation and maintenance requirements for the monitors.

(d) The monitoring plan is subject to approval by the Administrator. Use of the alternative monitoring method must not begin until approval is granted by the Administrator.

Back to Top

Notifications, Reports, and Records

Back to Top

§ 63.7750 What notifications must I submit and when?

(a) You must submit all of the notifications required by §§ 63.6(h)(4) and (5), 63.7(b) and (c); 63.8(e); 63.8(f)(4) and (6); 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in § 63.9(b)(2), if you start up your iron and steel foundry before April 22, 2004, you must submit your initial notification no later than August 20, 2004.

(c) If you start up your new iron and steel foundry on or after April 22, 2004, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required by § 63.7(b)(1).

(e) If you are required to conduct a performance test or other initial compliance demonstration, you must submit a notification of compliance status according to the requirements of § 63.9(h)(2)(ii). For opacity performance tests, the notification of compliance status may be submitted with the semiannual compliance report in § 63.7751(a) and (b) or the semiannual part 70 monitoring report in § 63.7551(d).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to the requirement specified in § 63.10(d)(2).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

Back to Top

§ 63.7751 What reports must I submit and when?

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements specified in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your iron and steel foundry by § 63.7683 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your iron and steel foundry.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

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

(b) Compliance report contents. Each compliance report must include the information specified in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

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

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

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took action consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from any emissions limitations (including operating limit), work practice standards, or operation and maintenance requirements, a statement that there were no deviations from the emissions limitations, work practice standards, or operation and maintenance requirements during the reporting period.

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

(7) For each deviation from an emissions limitation (including an operating limit) that occurs at an iron and steel foundry for which you are not using a continuous monitoring system (including a CPMS or CEMS) to comply with an emissions limitation or work practice standard required in this subpart, the compliance report must contain the information specified in paragraphs (b)(1) through (4) and (b)(7)(i) and (ii) of this section. This requirement includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each emissions source during the reporting period.

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

(8) For each deviation from an emissions limitation (including an operating limit) or work practice standard occurring at an iron and steel foundry where you are using a continuous monitoring system (including a CPMS or CEMS) to comply with the emissions limitation or work practice standard in this subpart, you must include the information specified in paragraphs (b)(1) through (4) and (b)(8)(i) through (xi) of this section. This requirement includes periods of startup, shutdown, and malfunction.

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

(ii) The date and time that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

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

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

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

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

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan and the source exceeds any applicable emissions limitation in § 63.7690, you must submit an immediate startup, shutdown, and malfunction report according to the requirements of § 63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an iron and steel foundry pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an iron and steel foundry along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emissions limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an iron and steel foundry to your permitting authority.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

Back to Top

§ 63.7752 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (4) of this section:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements of § 63.10(b)(2)(xiv).

(2) The records specified in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

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

(4) Records of the annual quantity of each chemical binder or coating material used to coat or make molds and cores, the Material Data Safety Sheet or other documentation that provides the chemical composition of each component, and the annual quantity of HAP used in these chemical binder or coating materials at the foundry as calculated from the recorded quantities and chemical compositions (from Material Data Safety Sheets or other documentation).

(b) You must keep the following records for each CEMS.

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

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

(3) Request for alternatives to relative accuracy tests for CEMS as required in § 63.8(f)(6)(i).

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

(c) You must keep the records required by §§ 63.7743, 63.7744, and 63.7745 to show continuous compliance with each emissions limitation, work practice standard, and operation and maintenance requirement that applies to you.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, Feb. 7, 2008]

Back to Top

§ 63.7753 In what form and for how long must I keep my records?

(a) You must keep your records in a form suitable and readily available for expeditious review, according to the requirements of § 63.10(b)(1).

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

(c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to the requirements in § 63.10(b)(1). You can keep the records for the previous 3 years offsite.

Back to Top

Other Requirements and Information

Back to Top

§ 63.7760 What parts of the General Provisions apply to me?

Table 1 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

Back to Top

§ 63.7761 Who implements and enforces this subpart?

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

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to non-opacity emissions limitations in § 63.7690 and work practice standards in § 63.7700 under § 63.6(g).

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

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

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

Back to Top

Definitions

Back to Top

§ 63.7765 What definitions apply to this subpart?

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

Automated conveyor and pallet cooling line means any dedicated conveyor line or area used for cooling molds received from pouring stations.

Automated shakeout line means any mechanical process unit designed for and dedicated to separating a casting from a mold. These mechanical processes include, but are not limited to, shaker decks, rotary separators, and high-frequency vibration units. Automated shakeout lines do not include manual

processes for separating a casting from a mold, such as personnel using a hammer, chisel, pick ax, sledge hammer, or jackhammer.

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

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

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

Cold box mold or core making line means a mold or core making line in which the formed aggregate is hardened by catalysis with a gas.

Combustion device means an afterburner, thermal incinerator, or scrap preheater.

Conveyance means the system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. A conveyance may, but does not necessarily include, control equipment designed to reduce emissions of the pollutants. Emissions that are released through windows, vents, or other general building ventilation or exhaust systems are not considered to be discharged through a conveyance.

Cooling means the process of molten metal solidification within the mold and subsequent temperature reduction prior to shakeout.

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

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

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

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

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

A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

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

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

Emissions limitation means any emissions limit or operating limit.

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

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

Fresh acid solution means a sulfuric acid solution used for the control of triethylamine emissions that has a pH of 2.0 or less.

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a *conveyance* as defined in this subpart.

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

Hazardous air pollutant means any substance on the list originally established in 112(b)(1) of the CAA and subsequently amended as published in the *Code of Federal Regulations.*

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

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

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

Mold vent means an intentional opening in a mold through which gases containing pyrolysis products of organic mold and core constituents produced by contact with or proximity to molten metal normally escape the mold during and after metal pouring.

Off blast means those periods of cupola operation when the cupola is not actively being used to produce molten metal. Off blast conditions include cupola startup when air is introduced to the cupola to preheat the sand bed and other cupola startup procedures as defined in the startup, shutdown, and malfunction plan. Off blast conditions also include idling conditions when the blast air is turned off or down to the point that the cupola does not produce additional molten metal.

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

Pouring area means an area, generally associated with floor and pit molding operations, in which molten metal is brought to each individual mold. Pouring areas include all pouring operations that do not meet the definition of a pouring station.

Pouring station means the fixed location to which molds are brought in a continuous or semicontinuous manner to receive molten metal, after which the molds are moved to a cooling area.

Responsible official means responsible official as defined in § 63.2.

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

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

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

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7222, Feb. 7, 2008]

Back to Top

Table 1 to Subpart EEEEE of Part 63—Applicability of General Provisions to Subpart EEEEE

[As stated in § 63.7760, you must meet each requirement in the following table that applies to you.]

Citation	Subject	Applies to Subpart EEEEE?	Explanation
63.1	Applicability	Yes	
63.2	Definitions	Yes	
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities	Yes	

63.5	Construction/reconstruction	Yes	
63.6(a)-(g)	Compliance with standards and maintenance requirements	Yes	
63.6(h)	Opacity and visible emissions standards	Yes	
63.6(i)-(j)	Compliance extension and Presidential compliance exemption	Yes	
63.7(a)(1)-(a)(2)	Applicability and performance test dates	No	Subpart EEEEE specifies applicability and performance test dates.
63.7(a)(3), (b)-(h)	Performance testing requirements	Yes	
63.8(a)(1)-(a)(3), (b), (c)(1)-(c)(3), (c)(6)-(c)(8), (d), (e), (f)(1)-(f)(6), (g)(1)-(g)(4)	Monitoring requirements	Yes	Subpart EEEEE specifies requirements for alternative monitoring systems.
63.8(a)(4)	Additional monitoring requirements for control devices in § 63.11	No	Subpart EEEEE does not require flares.
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No	Subpart EEEEE specifies requirements for operation of CMS and CEMS.
63.8(c)(5)	Continuous opacity monitoring system (COMS) Minimum Procedures	No	Subpart EEEEE does not require COMS.
63.8(g)(5)	Data reduction	No	Subpart EEEEE specifies data reduction requirements.
63.9	Notification requirements	Yes	Except: for opacity performance tests, Subpart EEEEE allows the notification of compliance status to be submitted with the semiannual compliance report or the semiannual part 70 monitoring report.
63.10(a)-(b), (c)(1)-(6), (c)(9)-(15), (d)(1)-(2), (e)(1)-(2), (f)	Recordkeeping and reporting requirements	Yes	Additional records for CMS in § 63.10(c)(1)-(6), (9)-(15) apply only to CEMS.
63.10(c)(7)-(8)	Records of excess emissions and parameter monitoring exceedances for CMS	No	Subpart EEEEE specifies records requirements.
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes	
63.10(e)(3)	Excess emissions reports	No	Subpart EEEEE specifies reporting requirements.
63.10(e)(4)	Reporting COMS data	No	Subpart EEEEE data does not require COMS.

63.11	Control device requirements	No	Subpart EEEEE does not require flares.
63.12	State authority and delegations	Yes	
63.13-63.15	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality	Yes	

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7223, Feb. 7, 2008]

Attachment B

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

Source Name:	Grede Foundries, Inc
Source Location:	2700 East Plum Street, New Castle, IN 47362
County:	Henry
SIC Code:	3321
Significant Source Modification No.:	065-31928-00007
Permit Reviewer:	Anh Nguyen

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

Back to Top

What This Subpart Covers

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

Emission and Operating Limitations

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

General Compliance Requirements

Back to Top

§ 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]

Back to Top

Testing and Initial Compliance Requirements

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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.

Back to Top

§ 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:

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

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 (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

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

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

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

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

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

X_{co2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 −15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the NO_x and SO_2 gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for

operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a

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

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

Back to Top

§ 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 CO_2 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 CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (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]

Back to Top

§ 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.

Back to Top

Continuous Compliance Requirements

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

Notifications, Reports, and Records

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

§ 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]

Back to Top

Other Requirements and Information

Back to Top

§ 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]

Back to Top

§ 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).

Back to Top

§ 63.6675 What definitions apply to this subpart?

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

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

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

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

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

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

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

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

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

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

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

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

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

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

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2 .

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

Emergency stationary RICE means any stationary 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 CO_2 .

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

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

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

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

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

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

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

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

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

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or

has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x , CO, and volatile organic compounds (VOC) into CO_2 , nitrogen, and water.

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

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

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

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

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

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

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

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

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

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

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

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

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

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

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

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

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

Subpart means 40 CFR part 63, subpart ZZZZ.

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

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

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

Back to Top

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

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

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

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

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

Back to Top

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

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

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

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.	than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent 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.	Comply with any operating limitations approved by the Administrator.

[76 FR 12867, Mar. 9, 2011]

Back to Top

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

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

For each . . .	**You must meet the following emission limitation, except during periods of startup . . .**	**During periods of startup you must . . .**
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	

	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

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

[75 FR 9680, Mar. 3, 2010]

Back to Top

Table 2 b 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	Comply with any operating limitations approved by the Administrator.

emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	

[1] Sources 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]

Back to Top

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

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

For each . . .	**You must meet the following requirement, except during periods of startup . . .**	**During periods of startup you must . . .**
1. Emergency stationary CI RICE and black start stationary CI RICE. [1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; [2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE < 100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; [2]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes	

	first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100 ≤ HP ≤ 300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2	
4. Non-Emergency, non-black start CI stationary RICE 300 < HP ≤ 500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; [2]	
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE < 100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; [2]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and	

	replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE < 100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; [2]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100 ≤ HP ≤ 500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2	
10. Non-emergency, non-black start 4SLB stationary RICE 100 ≤ HP ≤ 500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2	
11. Non-emergency, non-black start 4SRB stationary RICE 100 ≤ HP ≤ 500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2	
12. Non-emergency, non-black start landfill or digester gas-fired stationary RICE 100 ≤ HP ≤ 500	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2	

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

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

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

[75 FR 51593, Aug. 20, 2010]

Back to Top

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

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

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤ 300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; [1]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE 300 <HP≤ 500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; [1]	

	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE > 500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE > 500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; [1] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; [1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤ 500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; [1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	

	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 93 percent or more.	
9. Non-emergency, non-black start 4SRB stationary RICE ≤ 500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; [1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE > 500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O_2; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; [1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually,	

	whichever comes first, and replace as necessary.	

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

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

[75 FR 51595, Aug. 20, 2010]

Back to Top

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

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

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

5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower > 500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower > 500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

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

[75 FR 51596, Aug. 20, 2010]

Back to Top

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) [a b] (incorporated by reference, see § 63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM	(a) Measurements to determine O_2 concentration must be made at the same

		and	Method D6522-00m (2005)	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_2concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005)	(a) Measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[c]provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005),[a]Method 320 of	(a) CO Concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-

			40 CFR part 63, appendix A, or ASTM D6348-03	hour longer runs.

[a] You 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.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

[c] You 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]

Back to Top

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

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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and

		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP,	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at the outlet of the oxidation catalyst according to the requirements

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		in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of formaldehyde and not using NSCR	i. The average formaldehyde concentration determined from the initial performance test is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and

		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
11. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
13. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

[76 FR 12867, Mar. 9, 2011]

Back to Top

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	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

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		achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[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 ≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; [a]and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour

		rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; [a]and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 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	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE,	a. Reduce CO or formaldehyde emissions,	i. Conducting performance tests every 8,760 hours or 3 years, whichever

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	or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, 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 NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or

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

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

[76 FR 12870, Mar. 9, 2011]

Back to Top

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

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

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

Back to Top

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	Yes.	

	procedures and criteria		
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes.	

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

	new sources		
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes.	
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	

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

[75 FR 9688, Mar. 3, 2010]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Significant Permit Modification and Part 70 Operating Permit

Source Description and Location

Source Name:	Grede, LLC
Source Location:	2700 East Plum Street, New Castle, Indiana 47362
County:	Henry
SIC Code:	3321
Permit Renewal No.:	T 065-31928-00007
Permit Reviewer:	Anh Nguyen

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Grede, LLC relating to the operation of a gray iron and ductile iron foundry which is a secondary metal production plant. On May 23, 2012, Grede, LLC submitted an application to the OAQ requesting to renew its operating permit. Grede, LLC was issued its first Part 70 Operating Permit Renewal 065-23866-00007 on March 17, 2008.

Public Notice Information

On January 17, 2013, the Office of Air Quality (OAQ) had a notice published in the Courier Times in New Castle, Henry County stating that Grede, LLC had applied for a Renewal Permit of their Part 70 Operating Permit issued on May 23, 2007. The notice also stated that the OAQ proposed to issue a Part 70 Operating Permit Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On January 30, 2013, Erin Surinak, ERM on behalf of Grede, LLC submitted comments on the proposed Title V Operating Permit. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflects the permit that was on public notice. Changes that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result, ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comments and IDEM's Responses

IDEM received comments during the public notice period. IDEM's responses to the comments received are shown below. Appendix A to the ATSD contains revised emission calculations for this source as a result of the comments received by IDEM.

The changes listed below have been made to Part 70 Operating Permit No. T 005-31928-00007 Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Source Comment #1
Section D.2.5 of the draft permit the source requests that the preventive maintenance plan be warranted for the control devices and not for the production equipment.

A Preventive Maintenance Plan is required for the ~~shotblast 1 and shotblast 2 and their~~ control devices , Collector #10. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition **.**

IDEM RESPONSES:
The Preventive Maintenance Plan requirement must be included in every applicable Title V permit pursuant to 326 IAC 2-7-5(13). This rule refers back to the Preventive Maintenance Plan requirement as described in 326 IAC 1-6-3. This Preventive Maintenance Plan rule sets out the requirements for:

(1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),

(2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and

(3) The identification and quantification of the replacement parts for the facility which the Permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(3)).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3(a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. 326 IAC 1-6-3(b) provides that "...as deemed necessary by the commissioner, any person operating a facility shall comply with the requirements of subsection (a) of this section."

Source Comment #2
The source would like to correct the error in the draft permit regarding the horsepower rating for the emergency diesel generator.

IDEM RESPONSES: IDEM agrees to the changes required by the source comments. This will affect Section A.3 and E.2., Technical Report Document (**TSD Revision**), and Appendix A (see **ATSD 31928calc.xls** for corrections)

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

…

(f) Emergency engines as follows:

One (1) diesel emergency generator installed in 1998, rated at ~~67~~ **73** horsepower.[40 CFR 63, Subpart ZZZZ].

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Emergency engines as follows:

One (1) diesel emergency generator installed in 1998, rated at ~~67~~ **73** horsepower. [40 CFR 63, Subpart ZZZZ].

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 20-1] [40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1-1, apply to one (1) diesel emergency generator, rated ~~67~~ **73** horsepower except when otherwise specified in 40 CFR 63, Subpart ZZZZ.

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 63 Subpart ZZZZ, the Permittee shall comply with the provisions of 40 CFR 63 Subpart ZZZZ, which are incorporated as 326 IAC 20-82 for one (1) diesel emergency generator, rated ~~67~~ **73** horsepower.

TSD Revision

IDEM agrees to the changes made by the source comments and have shown the changes in the ATSD. However, No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflects the permit that was on public notice. This ATSD becomes the TSD of this permit.

Insignificant Activities

(f) Emergency engines as follows:

One (1) diesel emergency generator installed in 1998, rated at ~~67~~ **73** horsepower [40 CFR 63, Subpart ZZZZ].

…

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	6621
PM_{10}	1727
$PM_{2.5}$	1727
SO_2	1.88
VOC	657
CO	556
NO_x	9.81
GHGs as CO_2e	9362
Single HAP	~~27.15~~ **24**
Total HAP	~~100~~ **125**

…

Potential to Emit After Issuance

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
…	…	…	…	…	…	…	…	…	…	…
Emergency Diesel	0.04	0.04	0.04	0.04	~~0.52~~ **0.57**	~~0.04~~ **0.05**	~~0.11~~ **0.12**	~~19.33~~ **21.06**	-	-
Total PTE of Entire Source	1248	909	1430	1.75	10.0	498	517	~~9362~~ **9363**	**-**	**-**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	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".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

…

Federal Rule Applicability

…

NESHAP

(b) …

(c) One (1) diesel emergency generator installed in 1998, rated at ~~67~~ **73** horsepower …

…

IDEM COMMENTS: IDEM, OAQ has decided to make additional revisions to the permit.

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

(a) – (h)…

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID West 321 (~~to be~~ constructed in 2012), …

…

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the emission units and their control devices, Collector #7. 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.1.2~~ **D.1.3**…

~~D.1.3~~ **D.1.4** Particulate Matter (PM)

Collector #7 shall be in operation ~~at all times~~ ~~the inoculation~~ **whenever any associated** process is in operation.

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

D.2.8 Visible Emissions Notation

(a) Visible emission notations of stack **S-1** and S-10 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

D.2.9 Parametric Monitoring

The Permittee shall record the pressure drop across **Collector #1, Collector #3, and** Dust Collector # 10 used in conjunction with Mold Line #1, at least once per day when Mold Line #1 is in operation. When for any one reading, the pressure drop across **Collector #1, Collector #3, and** Collector #10 ~~is~~ **are** outside the normal range of 3.0 to 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered a violation of this permit.

…

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) - (g)…

(h) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID West 321 Core Machine (~~to be~~ constructed in 2012)**)**, …

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

…

IDEM Contact

Questions regarding this proposed permit can be directed to:

Anh Nguyen
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension (3-5334)
Or dial directly: (317) 233-5334
pnguyen@idem.in.gov

Please reference permit number **T 065-31928-00007** in all correspondence.

Appendix A: Emission Summary

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Uncontrolled Potential to Emit (tons/year)

Process/ Emission Unit	PM	PM10*	PM2.5*	SO2	NOx	VOC	CO	Single HAP	Total HAP's	CO2e
Electric Induction Furnaces	82.78	79.10	79.10	0	0	0	0	2.1	3.2	
Charge Handling	55.19	33.11	33.11	0	0	0	0	_	_	
Scrap Preheater	0.08	0.30	0.30	0.00	4.01	0.22	3.37	7.8 E-2	0.08	4750.45
Inoculation	367.92	367.92	367.92	0	0	0.46	0	1.10E+01	1.36E+01	
Sand Handling Line 1	1616.22	242.43	242.40	_	_	_	_	_	_	
Pouring/Casting Line 1	188.56	92.48	92.48	0.9	0.45	6.29	269.37	5.8	7.1	448.95
Castings Cooling Line 1	62.85	62.85	62.85	0	0	0		1.93	2.4	
Shakeout Line 1	143.66	100.56	100.56	0	0	53.87		4.5	5.4	
Shot Blast 1 & 2	763.22	76.32	76.32	0	0	0	0	2.30E+01	2.82E+01	
Grinders Line 1	0.16	0.07	0.07	0	0	0	0	4.80E-03	5.90E-03	
Sand Handling Line 2	1695.06	254.26	254.30	0	0	0	0	_	_	
Pouring/Casting Line 2	197.76	97.00	97.00	0.94	0.47	6.59	282.51	6.1	7.5	470.85
Castings Cooling Line 2	65.92	65.92	65.92	0	0	0		2.02	2.5	
Shakeout Line 2	150.67	105.47	105.47	0	0	56.5		4.7	5.7	
Shot Blast 3	800.45	80.04	80.04	0	0	0	0	2.40E+01	14.97	
Mold Line #2 Grinders	0.28	0.12	0.12	0	0	0	0	8.60E-03	0.01	
Organic HAP's Pouring, Cooling, & Shakeout	–	–	–	–	–	–	–	14.71	33.98	
North Core Sand Mixer & Core Machines	141.91	21.29	21.30	0	0	196.58	0	0.28	0.28	
South Core Sand Mixer & Core Machines	141.91	21.29	21.30	0	0	157.26	0	0.26	0.26	
New Core Sand Mixer& Core Machines	141.91	21.29	21.30	0	0	178.66	0	0.28	0.28	
Propane/LPG/Butane combustion sources	0.14	0.14	0.10	0.00	4.31	0.17	0.60	_	_	3672.00
Core Sand Reclaim System	4.51	4.51	4.56	0	0	0	0	_	_	
Emergency Diesel	0.04	0.04	0.04	0.04	~~0.52~~ **0.57**	~~0.04~~ **0.05**	~~0.11~~ **0.12**			~~19.33~~ **21.06**
Total	**6621**	**1727**	**1727**	**1.88**	**9.81**	**657**	**556**	**24**	**125**	~~9362~~ **9363**

* PM2.5 emission factors are assumed to be equivalent to PM10 emission factors

Appendix A: Emission Summary

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007

Reviewer: Anh Nguyen
Date: 5/23/2012

Limited Potential to Emit (tons/year)

Process/ Emission Unit	PM	PM10*	PM2.5*	SO2	NOx	VOC	CO	Single HAP	Total HAP's	CO2e
Electric Induction Furnaces	82.78	79.1	79.1	0	0	0	0	2.1 (Mn)	3.2	
Charge Handling	55.19	33.11	33.11	0	0	0	0	_	_	
Scrap Preheater	0.1	0.3	0.3	0	4.3	0.2	3.6	7.8 E-2 (Hexane)	0.08	4750.45
**Inoculation	138.06	138.06	138.06	0	0	0.46	0	1.1E01 (Mn)	1.40E+01	
**Sand Handling Line 1	79.20	36.85	242.4	_	_	_	_	_	_	
**Pouring/Casting Line 1			78.86	0.77	0.38	5.36	229.69	5.0 (Mn)	6.1	448.95
**Castings Cooling Line 1			53.59	0	0	0		1.65 (Mn)	2	
**Shakeout Line 1			85.75	0	0	45.94		3.8 (Mn)	4.6	
**Shot Blast 1 & 2	2.89	6.57	65.08	0	0	0	0	20.7 (Mn)	2.47E+01	
**Grinders Line 1			0.07	0	0	0	0	4.8E-03 (Mn)	5.90E-03	
**Sand Handling Line 2	227.80	227.80	227.8	0	0	0	0	_	_	
Pouring/Casting Line 2	197.76	97	97	0.94	0.47	6.59	282.51	6.1(Mn)	7.5	470.85
Castings Cooling Line 2	65.92	65.92	65.92	0	0	0		2.02 (Mn)	2.5	
Shakeout Line 2	150.67	105.47	105.47	0	0	56.5		4.7(Mn)	5.7	
*Shot Blast 3	88.17	88.17	88.17	0	0	0	0	2.4E01 (Mn)	14.97	
Grinders exhausting to S-6 & S-10	0.28	0.12	0.12	0	0	0	0	8.6E-03 (Mn)	0.01	
Organic HAP's Pouring, Cooling, & Shakeout	_	_	_	_	_	_	_	14.71 (Benz.)	33.98	
North Core Sand Mixer & Core Machines**	6.13	2.37	21.3	0	0	196.58	0	0.28 (Napth.)	0.28	
South Core Sand Mixer & Core Machines**	6.13	2.37	21.3	0	0	157.26	0	0.26 (Napth.)	0.26	
New Core Sand Mixer & Core Machines**	141.9	21.3	21.3	0	0	28.61	0	0.05	0.05	
Propane/LPG/Butane	0.1	0.3	0.3	0	4.3	0.2	0.6	_	_	3672.00
Core Sand Reclaim System	4.56	4.56	4.56	0	0	0	0	_	_	
Emergency Diesel	0.04	0.04	0.04	0.04	~~0.52~~ **0.57**	~~0.04~~ **0.05**	~~0.11~~ **0.12**			~~19.33~~ **21.06**
Total	**1248**	**909**	**1430**	**1.75**	**10.0**	**498**	**517**	**0.05**	**120**	~~9362~~ **9363**

**PM/PM10/PM2.5 value reflects the 326 IAC 2-2 (PSD) limit.

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <650 HP)

Company Name: **Grede Foundries, Inc.**
Address City IN Zip: **2700 East Plum Street, New Castle, Indiana 47362**
Permit No.: **T 065-31928-0007**
Reviewer: **Anh Nguyen**
Date: **05/23/12**

Heat Input Capacity Horsepower (hp)	Potential Throughput hp-hr/yr
~~67~~	~~33500.0~~
73.0	**36500.0**

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.00220	0.0021	0.031	0.00247	0.00668
Potential Emission in tons/yr	0.04	0.04	0.04	~~0.52~~ **0.57**	~~0.04~~ **0.05**	~~0.11~~ **0.12**

Methodology

Potential Througput (hp-hr/yr) = hp * 500 hr/yr

Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1 and Table 3.4-2
1 hp-hr = 7000 Btu, AP42 (Supplement B 10/96), Table 3.3-1, Footnote a.
Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)
*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included
The PM10 emission factor is filterable and condensable PM10 combined.
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <650 HP)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).
1 kg = 2.2 lbs

Potential Emission of Total HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	~~1.93E+01~~ **2.10E+01**	~~7.75E-04~~ **8.45E-04**	~~1.55E-04~~ **1.69E-04**

Summed Potential Emissions in tons/yr	~~1.93E+01~~ **2.10E+01**
CO2e Total in tons/yr	~~19.33~~ **21.06**

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Grede, LLC
Source Location:	2700 East Plum Street, New Castle, Indiana 47362
County:	Henry
SIC Code:	3321
Permit Renewal No.:	T 065-31928-00007
Permit Reviewer:	Anh Nguyen

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Grede, LLC relating to the operation of a gray iron and ductile iron foundry which is a secondary metal production plant. On May 23, 2012, Grede, LLC submitted an application to the OAQ requesting to renew its operating permit. Grede, LLC was issued its first Part 70 Operating Permit Renewal 065-23866-00007 on March 17, 2008.

Permitted Emission Units and Pollution Control Equipment

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

(a) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(b) one (1) charge handling system, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, exhausting through general ventilation;

(c) one (1) natural gas-fired scrap preheater, constructed in 2012, with a maximum heat input of 9.16 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(d) one (1) inoculation process, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, with particulate matter emissions controlled by a collection hood ducted to one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(e) one (1) molding operation (ID No. Mold Line #1), constructed in 1993, consisting of the following:

(1) one (1) sand muller (ID No. Line #1 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 102.5 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(2) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(3) one (1) metal cooling operation (ID No. Line #1 Cooling), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(4) one (1) mold shakeout operation (ID No. Line #1 Shakeout) and associated shakeout conveyor, with a maximum ductile iron casting throughput of 10.25 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(5) one (1) casting finishing operation, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast), each with a maximum throughput of 5.125 tons per hour of ductile iron castings, both controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10);

(B) four (4) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, all controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10).

Note: all the above operations which exhaust through stack ID No. S-1, are controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3).

(f) one (1) molding operation (ID No. Mold Line #2), constructed in 1968, consisting of the following:

(1) one (1) sand handling operation (ID No. Line #2 Sand) with a maximum mold sand throughput of 107.5 tons per hour, controlled by one (1) dust collector identified as collector #5, exhausting through stack S-5. The sand handling operations including the sand muller (ID Line #2 Muller), the return sand system, the casting and sand shaker conveyors, the sand transfer belt conveyors, and the sand shaker conveyors;

(2) one (1) metal pouring/cooling operation (ID No. Line #2 Pour/Cool), with a maximum throughput of 10.75 tons per hour of ductile iron, exhausting into the building;

(3) one (1) shakeout operation (ID No. Line #2 Shakeout) with a maximum throughput of 10.75 tons per hour of ductile iron, controlled by one (1) dust collector identified as collector #2, exhausting through stack S-2;

(4) One (1) shotblast machine, (ID Nos. #3 Shotblast) with a maximum throughput of 10.75 tons per hour of ductile iron castings, controlled by one (1) dust collector #6, exhausting through stack S-6;

(5) Three (3) grinders, with a total nominal throughput of 2.7 tons per hour of ductile iron castings, controlled by one (1) dust collector #6, exhausting through stack S-6;

(6) Four (4) grinders, with a total nominal throughput of 3.6 tons per hour of ductile iron castings, controlled by one (1) dust collector #10, exhausting through stack S-10;

(g) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a nominal throughput of 5.1 tons of sand per hour with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a nominal throughput of 4.08 tons of sand per hour, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a nominal throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID West 321 (to be constructed in 2012), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the West 321 Core Machine having a nominal throughput of 4.08 tons of sand per hour and each of the remaining five (5) core machines with a nominal throughput of 1.5 tons of sand per hour, all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

No fluxing operation is performed at this plant.

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

There are no unpermitted emission units operated at this source during this review process that were constructed and/or are operating without a permit:

Emission Units and Pollution Control Equipment Removed From the Source

The emissions from these punch up and transfer operations are part of the pouring/cooling operations and there are no separate emission factors for these processes. Therefore the following emission units have been removed from the equipment descriptions in the permit:

(1) one (1) mold punch up operation, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(2) one (1) casting transfer operation, consisting of the following:

(a) one (1) accumulating shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);

(b) one (1) degate shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);

(c) one (1) loader shaker; and

(d) one (1) belt conveyor, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand.

(3) one (1) mold punchup/cooling operation (ID No. Line #2 Punchup/Cool), with a maximum throughput of 10.75 tons per hour of ductile iron, controlled by one (1) dust collector identified as collector #5, exhausting through stack S-5;

Insignificant Activities

(1) Gasoline emergency generators not exceeding 110 horsepower.

Insignificant Activities

The source also consists of the following insignificant activities:

(a) Propane or liquified petroleum gas, or butane-fired combustion sources with heat input equal to or less than six (6) million Btu per hour.

(b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(c) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

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

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

(f) Emergency engines as follows:

One (1) diesel emergency generator installed in 1998, rated at 67 horsepower [40 CFR 63, Subpart ZZZZ].

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

(h) Operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including pneumatic conveying as follows:

(1) One (1) pneumatically conveyed core sand reclaim system with one (1) dust collector for particulate matter control, exhausting to the general ventilation.

Existing Approvals

Since the issuance of the Part 70 Operating Permit 065-23866-00007 on March 17, 2008, the source has constructed or has been operating under the following additional approvals:

(a) Administrative Amendment No. 065-26297-00007, issued on March 31, 2008;

(b) Significant Permit Modification No. 065-25776-00007 issued on August 19, 2008; and

(c) Administrative Amendment No. 065-29104-00007, issued on April 14, 2010**.**

(d) Significant Permit Modification No. 065-31316-00007 issued on March 3, 2012

(e) Administrative Amendment No. 065-26297-00007, issued on May 2, 2012

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

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Henry County.
.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Henry 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) $PM_{2.5}$
Henry 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 $PM_{2.5,}$ $SO_{2,}$ and NO_x 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

Henry County has been classified as attainment or unclassifiable in Indiana for SO2, CO, NO2 and Pb. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a gray iron and ductile iron foundry, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	6621
PM_{10}	1727
$PM_{2.5}$	1727
SO_2	1.88
VOC	657
CO	556
NO_x	9.76
GHGs as CO_2e	9362
Single HAP	27.15
Total HAP	100

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM-10, PM2.5, VOC, and CO is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

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

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

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of of GHGs is equal to or less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

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

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

Potential to Emit After Issuance

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

Process/ Emission Unit	**Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)**									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
Electric Induction Furnaces	82.79	79.1	79.1	0	0	0	0		2.1 (Mn)	3.1
Charge Handling	55.19	33.11	33.11	0	0	0	0		_	_
Scrap Preheater	0.1	0.3	0.3	0	4.3	0.2	3.6	4750	7.8E-02 (Hexane)	.08
Inoculation	138.1	138.1	138.1	0	0	0.46	0		1.1E01 (Mn)	1.4E01
Sand Handling Line 1	80.2	37.23	37.23	_	_	_	_		0	0
Pouring/Casting Line 1				0.77	0.38	5.36		448.95	5.0 (Mn)	6.1
Castings Cooling Line 1				0	0	0			1.65 (Mn)	2.0
Shakeout Line 1				0	0	45.94			3.8 (Mn)	4.6
Shot Blast 1 & 2	2.89	6.57	6.57	0	0	0	0		19.9 (Mn)	2.4 E01
Grinders Line 1				0	0	0	0		4.8E-03 (Mn)	5.9 E-03
Sand Handling Line 2	227.8	227.8	227.8	0	0	0	0		0	0
Pouring/Casting Line 2	197.76	97	97	0.94	0.47	6.59		470.85	6.1 (Mn)	7.5
Cooling Mold Line 2	65.92	65.92	65.92	0	0	0			2.02 (Mn)	2.5
Shakeout Line 2	150.67	150.67	150.67	0	0	0			4.7 (Mn)	5.7
Shot Blast 3	88.17	88.17	88.17	0	0	0	0		2.4 E01 (Mn)	14.97
Grinders Mold Line #2	.28	.12	.12	0	0	0	0		8.6E-03 (Mn)	0.01
Organic HAP's Pouring, Cooling, Shakeout	_	_	_	_	_	_	_		14.71 (Benzene)	33.98

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
North Core Sand Mixer & Core Machines	6.13	2.37	2.37	0	0	196.58	0		0.28 (Napth)	0.28
South Core Sand Mixer & Core Machines	6.13	2.37	2.37	0	0	157.26	0		0.26 (Napth)	0.26
New Core Sand Mixer & Core Machines	6.13	2.37	2.37	0	0	28.61	0		0.05 (Napth)	0.05
Propane/LPG/E01 Butane Combustion sources	0.1	0.1	0.1	0	4.3	0.2	0.6	3672	0	_
Core Sand Reclaim system.	4.56	4.56	4.56	0	0	0	0		0	_
Emergency Diesel	0.04	0.04	0.04	0.04	0.52	0.04	0.11	19.33	-	-
Total PTE of Entire Source	**1248**	**909**	**1430**	**1.75**	**10.0**	**498**	**517**	**9363**	**-**	**-**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	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".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

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

Federal Rule Applicability

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

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

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

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

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

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Innoculation-PM10	Dust Collector No. 7	N	367.92	77.26	100	N	N
Innoculation-PM2.5	Dust Collector No. 7	N	367.92	77.26	100	N	N
Mold Line #1 Sand Handling - PM10	Dust Collectors Nos. 1 and 3	Y	242.0	4.8	100	Y	N
Mold Line #1 Sand Handling - PM2.5	Dust Collectors Nos. 1 and 3	N	242.0	4.8	100	N	N
Mold Line #1 Sand Handling - PM	Dust Collectors Nos. 1 and 3	Y	1616.2	32.3	100	Y	N
Mold line #1 Shakeout - PM10	Dust Collectors Nos. 1 and 3	Y	100.56	1.71	100	Y	N
Mold line #1 Shakeout - PM2.5	Dust Collectors Nos. 1 and 3	N	143.66	2.45	100	N	N
Mold line #1 Shakeout - PM	Dust Collectors Nos. 1 and 3	Y	100.56	1.71	100	Y	N
Mold Line #1 Pouring, Cooling, & Shakeout - CO	None	Y	269.37	229.69	100	N	N
Mold line #2 Shakeout- PM10	Dust Collector No.2	N	105.5	2.11	100	N	N
Mold line #2 Shakeout- PM2.5	Dust Collector No.2	N	105.5	2.11	100	N	N
Mold line #2 Sand Handling - PM10	Dust Collector No.5	N	254.30	5.1	100	N	N
Mold line #2 Sand Handling - PM2.5	Dust Collector No.5	N	254.30	5.1	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the Mold line #1 Shakeout, Mold line #1 Sand Handling for PM-10. All other emission units either do not have PTE of more than 100 tpy or more; or they do not have control device.

NSPS

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

NESHAP

(b) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries (40 CFR 63, Subpart EEEEE (5E's)), which is incorporated by reference as 326 IAC 20-92. The four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3 and Furnace #4), one, (1) natural gas fired scrap preheater, the pouring station associated with Mold Line #1, the pouring stations associated with Mold Line #2, the shakeout operations associated with Mold Line #1, the shakeout operations associated with Mold Line #2, and the core machines are subject to the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries, (40 CFR 63.7681, Subpart EEEEE) because the source is a major source of HAPs and melting furnaces, scrap preheater and pouring areas are used to manufacture iron and steel.

Pursuant to 40 CFR 63.7682and 40 CFR 63.7690, the affected source that is subject to the requirements of 40 CFR 63, Subpart EEEEE consists of all facilities located at the source engaged in the following operations: metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines, automated shakeout lines and mold and core making lines. Also fugitive emissions from foundry operations. The specific facilities include the following:

(1) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(2) one (1) natural gas-fired scrap preheater, constructed in 1968, with a maximum heat input of 9.84 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of ductile iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(3) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

Pursuant to 40 CFR 63.7683, the Permittee shall comply with the requirements of 40 CFR 63, Subpart EEEEE.

Pursuant to 40 CFR 63. the Permittee has chosen to comply with the requirements of 40 CFR 63, Subpart EEEEE by:

(1) Meeting the individual organic HAP emission limits for each operation,

(2) Prepare and operate according to a written certification for the purchase of clean scrap

The source wants the flexibility to use all of the averaging and compliant materials options within the MACT. The MACT allows the source to switch between compliance options.

Nonapplicable portions of the NESHAP will not be included in the permit. The existing affected source associated with the production of iron and steel is subject to the following portions of 40 CFR 63, Subpart EEEEE:

1. 40 CFR 63.7680
2. 40 CFR 63.7681
3. 40 CFR 63.7682 (a)-(c)
4. 40 CFR 63.7683 (a) (b) and (f)
5. 40 CFR 63.7690 (a)(1), (5), (7)
6. 40 CFR 63.7700 (a)-(c), (e)
7. 40 CFR 63.7710 (a)-(b) (1),(3)-(6)
8. 40 CFR 63.7720 (a)-(c)
9. 40 CFR 63.7730 (a)-(b)
10. 40 CFR 63.7731 (a)-(b)
11. 40 CFR 63.7732 (a); (b)(1), (2), (4), ~~and~~ (5), and 6; (c) (1),(2),(4),(5);(d);(h);(i)

12. 40 CFR 63.7733 (f)
13. 40 CFR 63.7734 (a)(1),(5), (7)
14. 40 CFR 63.7735 (a),(b),(d)
15. 40 CFR 63.7736 (c) and (d)
16. 40 CFR 63.7740 (b) and (c)
17. 40 CFR 63.7741 (b) and (f)
18. 40 CFR 63.7742 (a)-(c)
19. 40 CFR 63.7743(a)(1),(5), (7), (12)
20. 40 CFR 63.7744 (a) and (c)
21. 40 CFR 63.7745
22. 40 CFR 63.7746
23. 40 CFR 63.7747
24. 40 CFR 63.7750
25. 40 CFR 63.7751
26. 40 CFR 63.7752
27. 40 CFR 63.7753
28. 40 CFR 63.7760
29. 40 CFR 63.7761
30. 40 CFR 63.7765

(c) One (1) diesel emergency generator installed in 1998, rated at 67 horsepower is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, which are incorporated by reference as 326 IAC 20-82. The units are subject to this subpart because they are stationary RICE located at a major source of HAP emissions.

The diesel emergency generator subject to Subpart ZZZZ is shown below:

(1) 63.6585
(2) 63.6590(a)(1)(ii)
(3) 63.6595(a)
(4) 63.6602
(5) 63.6605
(6) 63.6625(e)(2)
(7) 63.6640(a),(b), and (f)(1)
(8) 63.6645(a)(5)
(9) 63.6655(e)(2)
(10)63.6660
(11)63.6665

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart CCCCCC (6C's), Gasoline Dispensing Facilities, are not included in the permit because this source is a major source of HAPs, as defined in 40 CFR 63.2.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)
This existing source is a major stationary source for 326 IAC 2-2 (PSD) because it is one of the 28 listed source categories and at least one regulated pollutant, PM_{10} has controlled emissions greater than 100 tons per year.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of Mold Line 1 pouring, cooling and shakeout will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule specified in 326 IAC 2-6-3, an emission statement must be submitted annually by July .Therefore, the next emission statement for this source must be submitted by July 1, 2013. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)

State Rule Applicability – Individual Facilities

326 IAC 2-4.1-1 (New Source Toxics Control)
Since all of the facilities at this source, except core machine CB-5, have been constructed and permitted prior to July 27, 1997, the requirements of 326 IAC 2-4.1-1 do not apply. Potential single and total HAP emissions from core machine CB-5 are less than 10 and 25 tons per year, respectively, therefore, it is not subject to this rule.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) emissions, from the following emission units shall not exceed the PM limits as specified in the table below:

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)
Electric Induction Furnace #1	5.5	12.85
Electric Induction Furnace #2	5.5	12.85
Electric Induction Furnace #3	5.0	12.05
Electric Induction Furnace #4	5.0	12.05
Charge Handling System	21.0	31.53
Scrap Preheater	21.0	31.53
Inoculation Process	21.0	31.53
Mold Line 1 Sand Mueller	102.5	51.53
Mold Line #1 Pouring Operation	112.75	52.49
Mold Line #1 Cooling Operation	112.75	52.49
Mold Line #1 Shakeout Operation	112.75	52.49
Casting Transfer Operation	112.75	52.49
Shot Blast #1	5.125	12.25
Shot Blast #2	5.125	12.25
Mold Line #1 Grinders	0.89 (each)	3.79
Mold Line #2 Sand Handling	107.5	52.01
Mold Line #2 Pouring/Cooling Operation	118.25	52.98
Mold Line #2 Shakeout Operation	118.25	52.98
Shot Blast #3	10.75	20.13
3 grinders exhausting to S-6	2.70	7.98
4 grinders exhausting to S-10	3.6	9.67
North Core Sand Mixer	9.0	17.87
South Core Sand Mixer	9.0	17.87
New Core Sand Mixer	9.0	17.87
Core Sand Reclaim System	1.03	4.18

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

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Collector #7 shall be in operation at all times the inoculation process is in operation.

Collector #1 and Collector #3 shall be in operation at all times the Mold Line #1 sand muller is in operation, in order to comply with this limit.

Collector #10 shall be in operation at all times the shot blast #1 is in operation, in order to comply with this limit.

Collector #10 shall be in operation at all times the shot blast #2 is in operation, in order to comply with this limit.

Collector #5 shall be in operation at all times the Mold Line #2 sand handling operation is in operation, in order to comply with this limit.

Collector #6 shall be in operation at all times the shot blast #3 is in operation, in order to comply with this limit.

Collector #6 shall be in operation at all times the shot blast #4 is in operation in order to comply with this limit.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

(a) The following VOC emission limits and production limit have been determined to be BACT for the #1 Mold Line Pouring and Shakeout operations.(CP 065-2749-00007, issued on March 24, 1993 and SPM 065-16577-00007, issued on March 11, 2005):

(1) VOC emissions from the Mold Line #1 Pouring, Cooling and Shakeout operation shall not exceed 1.34 pounds of VOC per ton of metal charged;

(2) The throughput of metal to Mold Line #1 shall be less than 76,572 tons per twelve (12) consecutive month period.

(b) Potential VOC emissions from CB-1, CB-2, CB-3, CB-4, CB-5, and West 321 are greater than 25 tons per year. All of these core machines were constructed after January 1, 1980; therefore these core machines are subject to this rule.

(1) VOC emissions from core machines CB-1 and CB-2 shall be limited to less than 25 tons per year as follows:

(A) The total resin usage for core machines CB-1 and CB-2 shall be less than 271,636 pounds of resin per twelve (12) consecutive month period with compliance determined at the end of each month. Total DMEA usage for core machines CB-1 and CB-2 shall be less than 36,218

pounds of DMEA per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The VOC emissions (not including DMEA) from core machines CB-1 and CB-2 shall not exceed 0.05 pound per pound of resin.

(2) VOC emissions from the core machine identified as West 321,, shall be limited to less than 25 tons per year as follows:

(A) The total resin usage for the West 321, core machine shall be less than 271,636 pounds of resin per twelve (12) consecutive month period with compliance determined at the end of each month. DMEA usage for the West 321 core machine shall not exceed 36,218 pounds of DMEA per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The VOC emissions (not including DMEA) from the West 321, core machine shall not exceed 0.05 pound per pound of resin.

(3) VOC emissions from core machines CB-3 and CB-4 shall be limited to less than 25 tons per year as follows:

(A) The total resin usage for core machines CB-3 and CB-4 shall be less than 271,636 pounds of resin per twelve (12) consecutive month period with compliance determined at the end of each month. Total DMEA usage for core machines CB-3 and CB-4 shall be less than 36,218 pounds of DMEA per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The VOC emissions (not including DMEA) from core machines CB-3 and CB-4 shall not exceed 0.05 pound per pound of resin.

(4) VOC emissions from the core machine identified as CB-5, shall be limited to less than 25 tons per year as follows:

(A) The total resin usage for the CB-5, core machine shall be less than 271,636 pounds of resin per twelve (12) consecutive month period with compliance determined at the end of each month. DMEA usage for the CB-5 core machine shall not exceed 36,218 pounds of DMEA per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The VOC emissions (not including DMEA) from the West 321, core machine shall not exceed 0.05 pound per pound of resin.

Compliance with the above limits will render 326 IAC 2-2 and 326 IAC 8-1-6 not applicable.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Testing:

Emission Unit	Control Device	Pollutant	Frequency of Testing
Electric induction furnaces #1, #2, #3 and #4, scrap preheater and inoculation process	Dust collector #7	PM	Once every 5 years
Mold Line #1 metal pouring, metal cooling, mold shakeout, casting transfer, and sand handling operations	Dust Collectors #1 & #3	PM/PM10	Once every 5 years
Mold Line #1 casting finishing operations of two (2) shot blast machines and four (4) grinders.	Dust collector #10	PM/PM10	Once every 5 years
Mold Line #2 metal pouring mold shakeout and sand handling operation	Dust collector #5	PM	Once every 5 years
Shotblast 3	Dust collector #6	PM	Once every 5 years

Monitoring:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Dust Collector #7	Water Pressure Drop	Daily	3.0 to 10.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Dust Collector #10	Water Pressure Drop	Daily	3.0 to 10.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Dust Collector #5	Water Pressure Drop	Daily	3.0 to 10.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Dust Collector #6	Water Pressure Drop	Daily	3.0 to 10.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	

The monitoring requirements for Dust Collectors #1 and #3 are part of the CAM plan and the parametric monitoring of pressure drop readings and VE notations are required pursuant to 40 CFR 64. The monitoring frequency for units that are not "large" is once daily.

These monitoring conditions are necessary because the Dust Collectors, #5, #6, and #10 for the Mold Line # 1 and Mold Line #2 operations must operate properly to ensure compliance with 326 IAC 6-3 Particulate Matter Limitations and 326 IAC 2-7 (Part 70).

Recommendation

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

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

An application for the purposes of this review was received on May 23, 2012.

Conclusion

The operation of gray iron and ductile iron foundry which is a secondary metal production plant.shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 065-31928-00007.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Anh Nguyen 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) 233-5334 or toll free at 1-800-451-6027 extension 3-5334.

(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.idem.in.gov

Appendix A: Emission Summary

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Uncontrolled Potential to Emit (tons/year)

Process/ Emission Unit	PM	PM10*	PM2.5*	SO2	NOx	VOC	CO	Single HAP	Total HAP's	CO2e
Electric Induction Furnaces	82.78	79.10	79.10	0	0	0	0	2.1	3.2	
Charge Handling	55.19	33.11	33.11	0	0	0	0	_	_	
Scrap Preheater	0.08	0.30	0.30	0.00	4.01	0.22	3.37	7.8 E-2	0.08	4750.45
Inoculation	367.92	367.92	367.92	0	0	0.46	0	1.10E+01	1.36E+01	
Sand Handling Line 1	1616.22	242.43	242.40	_	_	_	_	_	_	
Pouring/Casting Line 1	188.56	92.48	92.48	0.9	0.45	6.29	269.37	5.8	7.1	448.95
Castings Cooling Line 1	62.85	62.85	62.85	0	0	0		1.93	2.4	
Shakeout Line 1	143.66	100.56	100.56	0	0	53.87		4.5	5.4	
Shot Blast 1 & 2	763.22	76.32	76.32	0	0	0	0	2.30E+01	2.82E+01	
Grinders Line 1	0.16	0.07	0.07	0	0	0	0	4.80E-03	5.90E-03	
Sand Handling Line 2	1695.06	254.26	254.30	0	0	0	0	_	_	
Pouring/Casting Line 2	197.76	97.00	97.00	0.94	0.47	6.59	282.51	6.1	7.5	470.85
Castings Cooling Line 2	65.92	65.92	65.92	0	0	0		2.02	2.5	
Shakeout Line 2	150.67	105.47	105.47	0	0	56.5		4.7	5.7	
Shot Blast 3	800.45	80.04	80.04	0	0	0	0	2.40E+01	14.97	
Mold Line #2 Grinders	0.28	0.12	0.12	0	0	0	0	8.60E-03	0.01	
Organic HAP's Pouring, Cooling, & Shakeout	–	–	–	–	–	–	–	14.71	33.98	
North Core Sand Mixer & Core Machines	141.91	21.29	21.30	0	0	196.58	0	0.28	0.28	
South Core Sand Mixer & Core Machines	141.91	21.29	21.30	0	0	157.26	0	0.26	0.26	
New Core Sand Mixer& Core Machines	141.91	21.29	21.30	0	0	178.66	0	0.28	0.28	
Propane/LPG/Butane combustion sources	0.14	0.14	0.10	0.00	4.31	0.17	0.60	_	_	3672.00
Core Sand Reclaim System	4.51	4.51	4.56	0	0	0	0	_	_	
Emergency Diesel	0.04	0.04	0.04	0.04	0.52	0.04	0.11			19.33
Total	**6621**	**1727**	**1727**	**1.88**	**9.76**	**657**	**556**	**100**	**125**	**9362**

* PM2.5 emission factors are assumed to be equivalent to PM10 emission factors

Appendix A: Emission Summary

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Limited Potential to Emit (tons/year)

Process/ Emission Unit	PM	PM10*	PM2.5*	SO2	NOx	VOC	CO	Single HAP	Total HAP's	CO2e
Electric Induction Furnaces	82.78	79.1	79.1	0	0	0	0	2.1 (Mn)	3.2	
Charge Handling	55.19	33.11	33.11	0	0	0	0	_	_	
Scrap Preheater	0.1	0.3	0.3	0	4.3	0.2	3.6	7.8 E-2 (Hexane)	0.08	4750.45
**Inoculation	138.06	138.06	138.06	0	0	0.46	0	1.1E01 (Mn)	1.40E+01	
**Sand Handling Line 1	79.20	36.85	242.4	_	_	_	_	_	_	
**Pouring/Casting Line 1			78.86	0.77	0.38	5.36	229.69	5.0 (Mn)	6.1	448.95
**Castings Cooling Line 1			53.59	0	0	0		1.65 (Mn)	2	
**Shakeout Line 1			85.75	0	0	45.94		3.8 (Mn)	4.6	
**Shot Blast 1 & 2	2.89	6.57	65.08	0	0	0	0	20.7 (Mn)	2.47E+01	
**Grinders Line 1			0.07	0	0	0	0	4.8E-03 (Mn)	5.90E-03	
**Sand Handling Line 2	227.80	227.80	227.8	0	0	0	0	_	_	
Pouring/Casting Line 2	197.76	97	97	0.94	0.47	6.59	282.51	6.1(Mn)	7.5	470.85
Castings Cooling Line 2	65.92	65.92	65.92	0	0	0		2.02 (Mn)	2.5	
Shakeout Line 2	150.67	105.47	105.47	0	0	56.5		4.7(Mn)	5.7	
*Shot Blast 3	88.17	88.17	88.17	0	0	0	0	2.4E01 (Mn)	14.97	
Grinders exhausting to S-6 & S-10	0.28	0.12	0.12	0	0	0	0	8.6E-03 (Mn)	0.01	
Organic HAP's Pouring, Cooling, & Shakeout	_	_	_	_	_	_	_	14.71 (Benz.)	33.98	
North Core Sand Mixer & Core Machines**	6.13	2.37	21.3	0	0	196.58	0	0.28 (Napth.)	0.28	
South Core Sand Mixer & Core Machines**	6.13	2.37	21.3	0	0	157.26	0	0.26 (Napth.)	0.26	
New Core Sand Mixer & Core Machines**	141.9	21.3	21.3	0	0	28.61	0	0.05	0.05	
Propane/LPG/Butane	0.1	0.3	0.3	0	4.3	0.2	0.6	_	_	3672.00
Core Sand Reclaim System	4.56	4.56	4.56	0	0	0	0	_	_	
Emergency Diesel	0.04	0.04	0.04	0.04	0.52	0.04	0.11			19.33
Total	**1248**	**909**	**1430**	**1.75**	**10.0**	**498**	**517**	**0.05**	**120**	**9362**

**PM/PM10/PM2.5 value reflects the 326 IAC 2-2 (PSD) limit.

Appendix A: Emission Summary

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Summary 6-3-2 limits

VOC total throughput Mold Line #1 including pouring, cooling and shakeout operations shall be less than	76,572	tons/12months
the Best Available Control Technology (BACT) for carbon monoxide (CO) for Mold Line 1 Pouring, Cooling and shakeout units shall not exceed	6	lb/ton of Carbon Monoxide (CO)
VOC from the Mold Line #1 shall be less than	60.16	lb/ton of metal or
VOC lb/ton of metal charge from the Mold Line #1	1.34	lb/ton

VOC DMEA usage for each core machines CB-3,CB-4, and core machine CB-5 each shall be less than	36217.6	lb/yr
VOC total resin usage for each core machine CB-1, CB-2 CB-3,CB-4, and core machine CB-5 ,shall be less than	271632	lb/yr
VOC (not include DMEA) for each core machine CB-1, CB-2 CB-3,CB-4, and core machine CB-5 ,shall be less than	0.05	lb/lb of resin

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

326 IAC 6-3-2 (e), $E = 4.10\ P^{0.67}$

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)	comply
Electric Induction Furnace #1	5.5	12.85	
Electric Induction Furnace #2	5.5	12.85	
Electric Induction Furnace #3	5	12.05	
Electric Induction Furnace #4	5	12.05	
Charge Handling System	21	31.53	
Scrap Preheater	21	31.53	
Inoculation Process	21	31.53	
Shot Blast #2	5.13	12.25	
Mold Line #1 Grinders (each)	0.89	3.79	
Shot Blast #3	10.75	20.13	
3 grinders exhausting to S-6	2.7	7.98	
4 grinders exhausting to S-10	3.6	9.67	

326 IAC 6-3-2 (e), $E = 55.0\ P^{0.11} - 40$

Emission Unit	Process Weight Rate (tons/hr)	Emission Limit (lbs/hr)	comply
Mold Line 1 Sand Muller	102.50	51.53	
Mold Line #1 Pouring Op.	112.75	52.49	
Mold Line #1 Cooling Op.	112.75	52.49	
Mold Line #1 Shakeout Op.	112.75	52.49	
Shot Blast #1	5.13	12.25	
Mold Line #2 Sand Handling	107.5	52.01	
Mold Line #2 Pouring/ Cooling Op.	118.25	52.98	
Mold Line #2 Punchup/ Cooling Op	118.25	52.98	
Mold Line #2 Shakeout Op.	118.25	52.98	

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Melting - Electric	21	PM	0.90	82.78	Collector #7	99.00%	0.83
Induction Furnace (#1-4)		PM-10	0.86	79.10	Collector #7	99.00%	0.79
		PM-2.5	0.86	79.10	Collector #7	99.00%	0.79
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
EPA SCC# 3-04-003-03		VOC	0.00	0.00			0.00
FIRE 6.25		CO	0.00	0.00			0.00
AP-42 Ch. 12.10		chromium	3.4E-04	3.1E-02	Collector #7	99.00%	3.1E-04
Fifth edition 1995		nickel	6.0E-04	5.5E-02	Collector #7	99.00%	5.5E-04
Speciate v. 3.1		arsenic	1.2E-04	1.1E-02	Collector #7	99.00%	1.1E-04
		antimony	1.7E-03	1.5E-01	Collector #7	99.00%	1.5E-03
	FIRE 6.25	manganese	2.3E-02	2.1E+00	Collector #7	99.00%	2.1E-02
	FIRE 6.25	lead	9.0E-03	8.3E-01	Collector #7	99.00%	8.3E-03
Methodology:		Total HAP's		3.1E+00			3.1E-02

Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
Criteria pollutant factors are from AP-42 and Fire 6.25. HAP emission factors for lead and manganese are from FIRE 6.25.
All other HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1.

http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf; pollutant factors

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Charge Handling	21	PM	0.60	55.19			55.19
		PM-10	0.36	33.11			33.11
Source of Pollutant Factors:		PM-2.5	0.36	33.11			33.11
SCC# 3-04-003-15		SO2	0.00	0.00			0.00
FIRE 6.25		NOx	0.00	0.00			0.00
AP-42 Ch. 12.10		VOC	0.00	0.00			0.00
Fifth edition 1995		CO	0.00	0.00			0.00

Methodology:

Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs

http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf;

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Inoculation	21	PM	4	367.92	Hood to #7	79.00%	77.26
		PM-10	4	367.92	Hood to #7	79.00%	77.26
		PM-2.5	4	367.92	Hood to #7	79.00%	77.26
Source of		SO2	0	0.00			0.00
Pollutant Factors:		NOx	0	0.00			0.00
FIRE 6.25		VOC	0.005	0.46			0.46
EPA SCC# 3-04-003-10		CO	0	0.00			0.00
AP-42 Ch. 12.10		manganese	1.2E-01	1.1E+01	Hood to #7	79.00%	2.3E+00
Fifth edition 1995		chromium	1.5E-03	1.4E-01	Hood to #7	79.00%	2.9E-02
Speciate v. 3.1		nickel	2.7E-03	2.5E-01	Hood to #7	79.00%	5.2E-02
		arsenic	5.2E-04	4.8E-02	Hood to #7	79.00%	1.0E-02
		antimony	7.4E-03	6.8E-01	Hood to #7	79.00%	1.4E-01
		lead	1.5E-02	1.4E+00	Hood to #7	79.00%	3.0E-01
		Total HAP's		1.4E+01			2.8E+00

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

HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1.
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf;

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Sand Handling, Mold Line #1	102.5	PM	3.6	1616.2	Collectors 1 &3	98.00%	32.3
Source of		PM-10	0.54	242.4	Collectors 1 &3	98.00%	4.8
Pollutant Factors:		PM-2.5	0.54	242.4	Collectors 1 &3	98.00%	4.8
FIRE 6.25							
EPA SCC# 3-04-003-50							

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring, Mold Line #1	10.25	PM	4.20	188.56	Collectors 1 &3	98.00%	3.77
Maximum Throughput		PM-10	2.06	92.48	Collectors 1 &3	98.00%	1.85
		PM-2.5	2.06	92.48	Collectors 1 &3	98.00%	1.85
Source of		SO2	0.02	0.90			0.90
Pollutant Factors:		NOx	0.01	0.45			0.45
FIRE 6.25		VOC	0.14	6.29			6.29
SCC# 3-04-003-18,20		*CO	6.00	269.37			269.37
Speciate v. 3.1		chromium	1.6E-03	7.2E-02	Collectors 1 &3	98.00%	1.4E-03
		nickel	2.8E-03	1.3E-01	Collectors 1 &3	98.00%	2.5E-03
		arsenic	5.5E-04	2.5E-02	Collectors 1 &3	98.00%	4.9E-04
		manganese	1.3E-01	5.8E+00	Collectors 1 &3	98.00%	1.2E-01
		antimony	7.8E-03	3.5E-01	Collectors 1 &3	98.00%	7.0E-03
		lead	1.6E-02	7.3E-01	Collectors 1 &3	98.00%	1.5E-02
		Total Hap's		7.1E+00			1.4E-01

Methodology:
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1. (See page 3 for details)
*CO emission factor of 6 lbs/ton includes pouring, cooling, and shakeout.
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf;

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting, Mold Line #1	8.74	PM	4.20	160.80	Collectors 1 &3	98.00%	3.22
Limited Throughput		PM-10	2.06	78.87	Collectors 1 &3	98.00%	1.58
		PM-2.5	2.06	78.87	Collectors 1 &3	98.00%	1.58
Source of		SO2	0.02	0.77			0.77
Pollutant Factors:		NOx	0.01	0.38			0.38
FIRE 6.25		VOC	0.14	5.36			5.36
SCC# 3-04-003-18,20		CO	6.00	229.69			229.69
Speciate v. 3.1		chromium	1.6E-03	6.1E-02	Collectors 1 &3	98.00%	1.2E-03
		nickel	2.8E-03	1.1E-01	Collectors 1 &3	98.00%	2.2E-03
		arsenic	5.5E-04	2.1E-02	Collectors 1 &3	98.00%	4.2E-04
		manganese	1.3E-01	5.0E+00	Collectors 1 &3	98.00%	1.0E-01
		antimony	7.8E-03	3.0E-01	Collectors 1 &3	98.00%	5.9E-03
		lead	1.6E-02	6.2E-01	Collectors 1 &3	98.00%	1.2E-02
		Total HAP's		6.1E+00			0.1

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf;

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling, Mold Line #1	10.25	PM	1.40	62.85	Collectors 1 &3	99.00%	0.63
Maximum Throughput		PM-10	1.40	62.85	Collectors 1 &3	99.00%	0.63
		PM-2.5	1.40	62.85	Collectors 1 &3	99.00%	0.63
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.25		VOC	0.00	0.00			0.00
SCC# 3-04-003-25		CO	---	0.00			0.00
Speciate v. 3.1		chromium	5.3E-04	0.02	Collectors 1 &3	99.00%	0.00
		nickel	9.4E-04	0.04	Collectors 1 &3	99.00%	0.000
		arsenic	1.8E-04	0.01	Collectors 1 &3	99.00%	0.000
		manganese	4.3E-02	1.93	Collectors 1 &3	99.00%	0.02
		antimony	2.6E-03	0.12	Collectors 1 &3	99.00%	0.001
		lead	5.4E-03	0.24	Collectors 1 &3	99.00%	0.002
		Total HAP's		2.4E+00			0.024

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling, Mold Line #1	8.74	PM	1.40	53.59	Collectors 1 &3	99.00%	0.54
Limited Throughput		PM-10	1.40	53.59	Collectors 1 &3	99.00%	0.54
		PM-2.5	1.40	53.59	Collectors 1 &3	99.00%	0.54
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.25		VOC	0.00	0.00			0.00
SCC# 3-04-003-25		CO	---	0.00			0.00
Speciate v. 3.1		chromium	5.3E-04	0.02	Collectors 1 &3	99.00%	0.000
		nickel	9.4E-04	0.04	Collectors 1 &3	99.00%	0.000
		arsenic	1.8E-04	0.01	Collectors 1 &3	99.00%	0.000
		manganese	4.3E-02	1.66	Collectors 1 &3	99.00%	0.02
		antimony	2.6E-03	0.10	Collectors 1 &3	99.00%	0.00
		lead	5.4E-03	0.21	Collectors 1 &3	99.00%	0.00
		Total HAP's		2.0E+00			0.020

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

http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Shakeout, Mold Line 1	10.25	PM	3.20	143.66	Collectors 1&3	98.00%	2.87
Maximum Throughput		PM-10	2.24	100.56	Collectors 1&3	98.00%	2.01
		PM-2.5	2.24	100.56	Collectors 1&3	98.00%	2.01
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.25		VOC	1.20	53.87			53.87
SCC# 3-04-003-31		CO	---	0.00			0.00
AP-42 Ch. 12.10		chromium	1.2E-03	5.5E-02	Collectors 1 &3	98.00%	1.1E-03
Fifth edition 1995		nickel	2.1E-03	9.6E-02	Collectors 1 &3	98.00%	1.9E-03
Speciate v. 3.1		arsenic	4.2E-04	1.9E-02	Collectors 1 &3	98.00%	3.7E-04
		manganese	9.9E-02	4.5E+00	Collectors 1 &3	98.00%	8.9E-02
		antimony	5.9E-03	2.7E-01	Collectors 1 &3	98.00%	5.3E-03
		lead	1.2E-02	5.5E-01	Collectors 1 &3	98.00%	1.1E-02
		Total HAP's		5.4E+00			0.109

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Shakeout, Mold Line 1	8.74	PM	3.20	122.50	Collectors 1&3	98.00%	2.45
Limited Throughput		PM-10	2.24	85.75	Collectors 1&3	98.00%	1.71
		PM-2.5	2.24	85.75	Collectors 1&3	98.00%	1.71
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.25		VOC	1.20	45.94			45.94
SCC# 3-04-003-31		CO	---	0.00			0.00
AP-42 Ch. 12.10		chromium	1.2E-03	4.7E-02	Collectors 1&3	98.00%	9.3E-04
Fifth edition 1995		nickel	2.1E-03	8.2E-02	Collectors 1&3	98.00%	1.6E-03
Speciate v. 3.1		arsenic	4.2E-04	1.6E-02	Collectors 1&3	98.00%	3.2E-04
		manganese	9.9E-02	3.8E+00	Collectors 1&3	98.00%	7.6E-02
		antimony	5.9E-03	2.3E-01	Collectors 1&3	98.00%	4.5E-03
		lead	1.2E-02	4.7E-01	Collectors 1&3	98.00%	9.4E-03
		Total HAP's		4.6E+00			0.093

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

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

http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf;

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Shot Blast 1 & 2	10.250	PM	17.00	763.22	Collector #10	99.00%	7.63
Maximum Throughput		PM-10	1.70	76.32	Collector #10	99.00%	0.76
		PM-2.5	1.70	76.32	Collector #10	99.00%	0.76
		SO2	0.00	0.00			0.00
Source of		NOx	0.00	0.00			0.00
Pollutant Factors:		VOC	0.00	0.00			0.00
FIRE 6.25		CO	0.00	0.00			0.00
SCC# 3-04-003-40		chromium	6.5E-03	2.9E-01	Collector #10	99.00%	2.9E-03
AP-42 Ch. 12.10		nickel	1.1E-02	5.1E-01	Collector #10	99.00%	5.1E-03
Fifth edition 1995		manganese	5.3E-01	2.4E+01	Collector #10	99.00%	2.4E-01
Speciate v.3.1		antimony	3.1E-02	1.4E+00	Collector #10	99.00%	1.4E-02
		arsenic	2.2E-03	9.9E-02	Collector #10	99.00%	9.9E-04
		Lead	6.5E-02	2.9E+00	Collector #10	99.00%	2.9E-02
		Total HAP's		2.82E+01			0.282

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Shot Blast 1 & 2	8.740	PM	17.00	650.78		99.00%	6.51
Limited Throughput		PM-10	1.70	65.08		99.00%	0.65
		PM-2.5	1.70	65.08		99.00%	0.65
		SO2	0.00	0.00			0.00
Source of		NOx	0.00	0.00			0.00
Pollutant Factors:		VOC	0.00	0.00			0.00
FIRE 6.25		CO	0.00	0.00			0.00
SCC# 3-04-003-40		chromium	6.5E-03	0.25		99.00%	2.5E-03
AP-42 Ch. 12.10		nickel	1.1E-02	0.44		99.00%	4.4E-03
Fifth edition 1995		manganese	5.3E-01	20.17		99.00%	2.0E-01
Speciate v.3.1		antimony	3.1E-02	1.20		99.00%	1.2E-02
		arsenic	2.2E-03	0.08		99.00%	8.5E-04
		Lead	6.5E-02	2.51		99.00%	2.5E-02
		Total HAP's		2.5E+01			0.247

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
WebFire v. 6.25

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Mold Line #1 Grinders	3.560	PM	0.01	0.16		98.00%	0.00
Source of		PM-10	0.0045	0.07		98.00%	0.00
		PM-2.5	0.0045	0.07		98.00%	0.00
Pollutant Factors:		SO2	0.00	0.00			0.00
FIRE 6.25		NOx	0.00	0.00			0.00
SCC# 3-04-003-60		VOC	0.00	0.00			0.00
AP-42 Ch. 12.10		CO	0.00	0.00			0.00
Fifth edition 1995		chromium	3.8E-06	5.9E-05		98.00%	1.2E-06
Speciate v.3.1		antimony	1.9E-05	2.9E-04		98.00%	5.8E-06
		nickel	6.7E-06	1.0E-04		98.00%	2.1E-06
		arsenic	1.3E-06	2.0E-05		98.00%	4.1E-07
		manganese	3.1E-04	4.8E-03		98.00%	9.7E-05
		Lead	3.9E-05	6.0E-04		98.00%	1.2E-05
		Total HAP's		5.9E-03			0.000

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

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Sand Handling Line#2 Sand	107.5	PM	3.6	1695.1	Collector #5	98.00%	33.9
		PM-10	0.54	254.3	Collector #5	98.00%	5.1
Source of		PM-2.5	0.54	254.3	Collector #5	98.00%	5.1
Pollutant Factors:							
FIRE 6.25							
EPA SCC# 3-04-003-50							

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting	10.75	PM	4.20	197.76			197.76
Line #2 Pour/Cool		PM-10	2.06	97.00			97.00
		PM-2.5	2.06	97.00			97.00
Source of		SO2	0.02	0.94			0.94
Pollutant Factors:		NOx	0.01	0.47			0.47
FIRE 6.25		VOC	0.14	6.59			6.59
SCC# 3-04-003-18,20		*CO	6.00	282.51			282.51
Speciate v. 3.1		chromium	1.6E-03	7.5E-02			7.5E-02
		nickel	2.8E-03	1.3E-01			1.3E-01
		arsenic	5.5E-04	2.6E-02			2.6E-02
		manganese	1.3E-01	6.1E+00			6.1E+00
		antimony	7.8E-03	3.7E-01			3.7E-01
		lead	1.6E-02	7.6E-01			7.6E-01
		Total HAP's		7.5E+00			7.5E+00

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1. (See page 3 for details)
*CO emission factor of 6 lbs/ton includes pouring, cooling, and shakeout.
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf

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

http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf;

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling	10.75	PM	1.40	65.92	Collector #5	98.00%	1.32
Line #2 Casting / Cool		PM-10	1.40	65.92	Collector #5	98.00%	1.32
		PM-2.5	1.40	65.92	Collector #5	98.00%	1.32
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.25		VOC	0.00	0.00			0.00
SCC# 3-04-003-25		CO	---	0.00			0.00
Speciate v. 3.1		chromium	5.3E-04	0.03	Collector #5	98.00%	0.001
		nickel	9.4E-04	0.044	Collector #5	98.00%	0.001
		arsenic	1.8E-04	0.009	Collector #5	98.00%	0.000
		manganese	4.3E-02	2.04	Collector #5	98.00%	0.041
		antimony	2.6E-03	0.122	Collector #5	98.00%	0.002
		lead	5.4E-03	0.254	Collector #5	98.00%	0.005
		Total HAP's		2.5			0.05

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1. (See page 3 for details)
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Shakeout	10.75	PM	3.20	150.67	Collector #2	98.00%	3.01
Line #2 Shakeout		PM-10	2.24	105.47	Collector #2	98.00%	2.11
		PM-2.5	2.24	105.47	Collector #2	98.00%	2.11
Source of		SO2	0.00	0.00			0.00
Pollutant Factors:		NOx	0.00	0.00			0.00
FIRE 6.25		VOC	1.20	56.50			56.50
SCC# 3-04-003-31		CO	---	0.00			0.00
AP-42 Ch. 12.10		chromium	1.2E-03	5.7E-02	Collector #2	98.00%	1.1E-03
Fifth edition 1995		nickel	2.1E-03	1.0E-01	Collector #2	98.00%	2.0E-03
Speciate v. 3.1		arsenic	4.2E-04	2.0E-02	Collector #2	98.00%	4.0E-04
		manganese	9.9E-02	4.7E+00	Collector #2	98.00%	9.3E-02
		antimony	5.9E-03	2.8E-01	Collector #2	98.00%	5.6E-03
		lead	1.2E-02	5.8E-01	Collector #2	98.00%	1.2E-02
		Total HAP's		5.70			0.11

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1. (See page 3 for details)
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf; pollutant factors

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Shotblasters #3	10.750	PM	17.00	800.45	Collector #6	98.00%	16.01
		PM-10	1.70	80.04	Collector #6	98.00%	1.60
Source of		PM-2.5	1.70	80.04	Collector #6	98.00%	1.60
Pollutant Factors:		SO2	0.00	0.00			0.00
FIRE 6.25		NOx	0.00	0.00			0.00
SCC# 3-04-003-40 cleaning finishing		VOC	0.00	0.00			0.00
AP-42 Ch. 12.10		CO	0.00	0.00			0.00
Fifth edition 1995		chromium	6.5E-03	3.0E-01	Collector #6	98.00%	6.1E-03
Speciate v. 3.1		manganese	5.3E-01	2.5E+01	Collector #6	98.00%	5.0E-01
		nickel	1.1E-02	5.4E-01	Collector #6	98.00%	1.1E-02
		arsenic	2.2E-03	1.0E-01	Collector #6	98.00%	2.1E-03
		antimony	3.1E-02	1.5E+00	Collector #6	98.00%	3.0E-02
		Lead	6.5E-02	3.1E+00	Collector #6	98.00%	6.2E-02
		Total HAP's		30.32			0.61

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Grinders exhausting to S- 6&S-10	6.300	PM	0.01	0.28	Collector #6	98.00%	0.0055
		PM-10	0.0045	0.12	Collector #6	98.00%	0.0025
Source of		PM-2.5	0.0045	0.12	Collector #6	98.00%	0.0025
Pollutant Factors:		SO2	0.00	0.00			0.00
FIRE 6.25		NOx	0.00	0.00			0.00
SCC# 3-04-003-60		VOC	0.00	0.00			0.00
AP-42 Ch. 12.10		CO	0.00	0.00			0.00
Fifth edition 1995		chromium	3.8E-06	1.0E-04	Collector #6	98.00%	2.1E-06
Speciate v. 3.1		nickel	6.7E-06	1.8E-04	Collector #6	98.00%	3.7E-06
		arsenic	1.3E-06	3.6E-05	Collector #6	98.00%	7.2E-07
		magnesium	3.1E-04	8.6E-03	Collector #6	98.00%	1.7E-04
		antimony	1.9E-05	5.1E-04	Collector #6	98.00%	1.0E-05
		Lead	3.9E-05	1.1E-03	Collector #6	98.00%	2.1E-05
		Total HAP's		0.01			0.00

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1. (See page 3 for details)

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

Appendix A: Emission Calculations
Gray Ductile Iron Foundry Emissions

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process:	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
North Core Sand Mixer	9	PM	3.6	141.9	Bin Vent 2	98.00%	2.8
Source of		PM-10	0.54	21.3	Bin Vent 2	98.00%	0.4
		PM-2.5	0.54	21.3	Bin Vent 2	98.00%	0.4
Pollutant Factors:							
FIRE 6.25							
EPA SCC# 3-04-003-50							

Process:	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
South Core Sand Mixer	9	PM	3.6	141.9	Bin Vent 3	98.00%	2.8
		PM-10	0.54	21.3	Bin Vent 3	98.00%	0.4
Source of		PM-2.5	0.54	21.3	Bin Vent 3	98.00%	0.4
Pollutant Factors:							
FIRE 6.25							
EPA SCC# 3-04-003-50							

Process:	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
New Core Sand Mixer	9	PM	3.6	141.9	Bin Vent 4	98.00%	2.8
		PM-10	0.54	21.3	Bin Vent 4	98.00%	0.4
Source of		PM-2.5	0.54	21.3	Bin Vent 4	98.00%	0.4
Pollutant Factors:							
FIRE 6.25							
EPA SCC# 3-04-003-50							

Methodology:
Ef = Emission factor
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc
1ton = 2000 lbs
http://www.michigan.gov/documents/deq/deq-aqd-air-eval-era-EmissionCalculation-foundries_324045_7.pdf

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

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
9.2	80.2

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.3	0.0	4.0	0.2	3.4
Controlled Emissions in tons/yr	0.001	0.003	0.0	4.0	0.2	3.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
Emissions from the Scrap Preheater are controlled by dust collector #7. Control Efficiency = 99%.

Methodology

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

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

See page 16 for HAPs emissions calculations.

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

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	8.425E-05	4.814E-05	3.009E-03	7.222E-02	1.364E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.006E-05	4.413E-05	5.617E-05	1.525E-05	8.425E-05
				Total HAP's	0.08

Methodology is the same as page 1.

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

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

Company Name: Grede LLC
Address: 2700 East Plum Street, New Castle, Indiana 47362
Plant ID: 065-00007
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
9.2	1020	78.7

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	4,720	0.09	0.09
Summed Potential Emissions in tons/yr	4,720		
CO2e Total in tons/yr	4,749		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission

Appendix A: Emission Calculation
Uncontrolled VOC Emissions from Phenolic Urethane Cold Box Core Making

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Machine	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lbs/ton cores)	Maximum DMEA usage (lb DMEA/ton cores)	Uncontrolled VOC Emissions from Resin Evaporation (tons/yr)	Uncontrolled DMEA Emissions from DMEA Usage (tons/yr)	Total Uncontrolled VOC Emissions (tons/yr)	*Controlled DMEA Emissions (tons/yr)	Total VOC Emissionsw ith controls (tons/yr)
CB-1	1.5	1.2	1.2	3.2	7.88	21.02	28.91	0.42	8.30
CB-2	1.5	1.2	1.2	3.2	7.88	21.02	28.91	0.42	8.30
CB-3	1.5	1.2	1.2	3.2	7.88	21.02	28.91	0.42	8.30
CB-4	1.5	1.2	1.2	3.2	7.88	21.02	28.91	0.42	8.30
CB-5	1.5	1.2	1.2	3.2	7.88	21.02	28.91	0.42	8.30
W-321	4.08	1.2	1.2	3.2	21.44	57.19	78.63	1.14	22.59
103	5.1	1.2	1.2	3.2	26.81	71.48	98.29	1.43	28.24
106	5.1	1.2	1.2	3.2	26.81	71.48	98.29	1.43	28.24
N-321	4.08	1.2	1.2	3.2	21.44	57.19	78.63	1.14	22.59
S-321	4.08	1.2	1.2	3.2	21.44	57.19	78.63	1.14	22.59
Total					**157.36**	**419.64**	**577.00**	**8.39**	**165.76**

Methodology

Uncontrolled VOC Resin (tons/yr)=Capacity (tons/hr) x VOC Emission factor Resin (lbs/ton) x 8760 hr/yr x 1ton/2000 lbs.

Uncontrolled VOC DMEA(tons/yr)=Capacity (tons/hr) x VOC Emission factor Resin (lbs/ton) x 8760 hr/yr x 1ton/2000 lbs.

Total Uncontrolled VOC emissions= Uncontrolled VOC Resin (tons/yr) + Uncontrolled VOC DMEA(tons/yr)

Controlled DMEA (tons/yr) = Total Uncontrolled VOC Emissions (tons/yr) x (.02)

Total VOC Emissions with Controlls (tons/yr) = Uncontrolled VOC Resin (tons/yr) + Controlled DMEA (tons/yr)

Appendix A: Emission Calculation
Limited VOC Emissions from Phenolic Urethane Cold Box Core Making

Company Name: Grede Foundries, Inc.
Address: 2700 East Plum Street, New Castle, Indiana 47362
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Limits necessary to render 326 IAC 8-1-6 (BACT) and/or 326 IAC 2-2 (PSD) not applicable

Machine	Core Production Limit (tons cores/yr)	VOC Emission Factor from Resin Evaporation (lbs/ton cores)	VOC Emission Factor from Resin Evaporation (lbs/lbs resin)	Resin Usage Limit (lbs/yr)	DMEA EF (lb/tons cores)	Limited VOC Emissions from resin (tons/yr)	Limited DMEA Emissions from DMEA Usage (tons/yr)	Total Limited VOC Emissions	*Controlled DMEA Emissions (tons/yr)	Total VOC Emissionsafter control (tons/yr)
CB-1 & CB-2	11318	1.2	0.05	271636	3.2	6.79	18.11	24.90	0.36	7.15
CB-3 & CB-4	11318	1.2	0.05	271636	3.2	6.79	18.11	24.90	0.36	7.15
CB-5	11318	1.2	0.05	271636	3.2	6.79	18.11	24.90	0.36	7.15
						20.37	**54.33**	**74.70**	**1.09**	**21.46**
SubTotal +Controlled Emissions from 103, 106, W-321, N-321, &S-321										**145.69**

Methodology

Limited VOC Resin (tons/yr)=Core Production (tons/yr) x VOC Emission factor Resin (lbs/ton) / 1ton/2000 lbs.

Limited VOC DMEA(tons/yr)=Core Production (tons/yr) x DMEA Emission factor(lbs/ton) / 1ton/2000 lbs.

Total Limited VOC emissions= Limited VOC Resin (tons/yr) + Limited VOC DMEA(tons/yr)

Controlled DMEA Emissions (tons/yr) = TotalLimited VOC Emissions (tons/yr) x (.02)

Total VOC Emissions with Controlls (tons/yr) = Limited VOC Resin (tons/yr) + Controlled DMEA Emisiions (tons/yr)

Appendix A: Gray Ductile Iron Foundry Operations
HAP Emission Calculations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Uncontrolled

Material	Process	Maximum Usage (lbs/hr)	Weight % Phenol	Weight % MDI	Weight % Naphthalene	Weight % Polymeric Diphenyl methane	Phenol Emissions (ton/yr)	MDI Emissions (ton/yr)	Naphthalene Emissions (ton/yr)	Polymeric Diphenylmethane Emissions (ton/yr)
Phenolic Urethane Cold Box Core Making										
Part I Binder	W-321, CB-1 - CB-5	99.00	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.28	0.00
Part II Binder	W-321, CB-1 - CB-5	81.00	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	103 & 106	99.00	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.28	0.00
Part II Binder	103 & 106	81.00	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	N-321 & S-321	89.76	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.26	0.00
Part II Binder	N-321 & S-321	73.44	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
							0.00	**0.00**	**0.82**	**0.00**

	Total HAPs (tons/yr)
Total Potential Emissions:	**0.82**

Limited

Material	Process	Limited Usage (lbs/hr)	Weight % Phenol	Weight % MDI	Weight % Naphthalene	Weight % Polymeric Diphenyl methane	Phenol Emissions (ton/yr)	MDI Emissions (ton/yr)	Naphthalene Emissions (ton/yr)	Polymeric Diphenylmethane Emissions (ton/yr)
Phenolic Urethane Cold Box Core Making										
Part I Binder	W-321, CB-1 - CB-5	17.05	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.05	0.00
Part II Binder	W-321, CB-1 - CB-5	13.95	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	103 & 106	99.00	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.28	0.00
Part II Binder	103 & 106	81.00	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	N-321 & S-321	89.76	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.26	0.00
Part II Binder	N-321 & S-321	73.44	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
							0.00	**0.00**	**0.59**	**0.00**

	Total HAPs (tons/yr)
Total Limited Emissions:	**0.59**

Reduction Factors for Core Making

Pollutant	Binder Reduction Factor
Phenol	0
MDI	0
Naphthalene	0.0325
Polymeric Diphenylmethane	0

METHODOLOGY

Max. Hourly Resin Usage Rate = Max. Sand Throughput to Mixer (tons/hr) * 1% (max. resin content) * 2000 lbs/ton
HAP Emissions from Resins = Max. Hourly Usage Rate * % HAP * Reduction Factor * 8760 hrs/yr * 1 ton/2000 lbs
Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries", and refers to the weight percent of HAP that is emitted to the atmosphere.
Limited resin usage based on calculations for core making on page 11 of this Appendix A.

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

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process	Maximum Usage (tons/yr)	Acrolein EF (lb/lb)	Benzene EF (lb/lb)	Formaldehyde EF (lb/lb)	Hydrogen Cyanide EF (lb/lb)	Xylenes EF (lb/lb)	Naphthalene EF (lb/lb)	Phenol EF (lb/lb)	Toluene EF (lb/lb)	Aromatic Amines EF (lb/lb)	Aldehydes EF (lb/lb)	Potential Acrolein Emissions (tons/yr)	Potential Benzene Emissions (tons/yr)	Potential Formaldehyde Emissions (tons/yr)	Potential HCN Emissions (ton/yr)	Potential Xylenes Emissions (tons/yr)	Potential Naphthalene Emissions (tons/yr)	Potential Phenol Emissions (ton/yr)	Potential Toluene Emissions (tons/yr)	Potential Aromatic Amines Emissions (tons/yr)	Potential Aldehyde Emissions (tons/yr)
CB1-CB5, 321	946.08	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219	0.029	5.062	0.021	0.996	0.540	0.021	3.693	0.788	0.332	0.207
103 &106	946.08	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219	0.029	5.062	0.021	0.996	0.540	0.021	3.693	0.788	0.332	0.207
N-321 &S-321	857.78	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219	0.027	4.590	0.019	0.903	0.490	0.019	3.349	0.715	0.301	0.188
												0.09	**14.71**	**0.06**	**2.90**	**1.57**	**0.06**	**10.74**	**2.29**	**0.97**	**0.60**

Total Potential Emissions (tons/yr) **33.98**

Material	Limited usage (tons/yr)	Acrolein EF (lb/lb)	Benzene EF (lb/lb)	Formaldehyde EF (lb/lb)	Hydrogen Cyanide EF (lb/lb)	Xylenes EF (lb/lb)	Naphthalene EF (lb/lb)	Phenol EF (lb/lb)	Toluene EF (lb/lb)	Total Aromatic Amines EF (lb/lb)	Total Aldehydes EF (lb/lb)	Limited Acrolein Emissions (tons/yr)	Limited Benzene Emissions (tons/yr)	Limited Formaldehyde Emissions (ton/yr)	Limited HCN Emissions (tons/yr)	Limited Xylenes Emissions (tons/yr)	Limited Naphthalene Emissions (tons/yr)	Limited Phenol Emissions (tons/yr)	Limited Toluene Emissions (tons/yr)	Limited Aromatic Amines Emissions (tons/yr)	Limited Aldehyde Emissions (tons/yr)
CB1-CB5, 321	543.20	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219	0.017	2.907	0.012	0.572	0.310	0.012	2.121	0.452	0.191	0.119
103 &106	946.08	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219	0.029	5.062	0.021	0.996	0.540	0.021	3.693	0.788	0.332	0.207
N-321 &S-321	857.78	0.000031	0.005351	0.000022	0.001053	0.000571	0.000022	0.003904	0.000833	0.000351	0.000219	0.027	4.590	0.019	0.903	0.490	0.019	3.349	0.715	0.301	0.188
												0.07	**12.56**	**0.05**	**2.47**	**1.34**	**0.05**	**9.16**	**1.96**	**0.82**	**0.51**

Total Limited Emissions (tons/yr) **29.00**

Appendix A: Emissions Calculations
Source Name: Grede Foundries, Inc.
Source Location: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Permit Reviewer: Anh Nguyen
Date: 5/23/2012

Particulate Emissions (PM/PM10) (tons/year)				
Emission Unit	Grain Loading (gr/dscf)	Air Flow Rate (acfm)	Uncontrolled Emissions (tons/yr)	Controlled Emissions (tons/yr) 90% Control Efficiency
Sand Reclaim System	0.03	4000	4.5	0.45
		Total Emissions	4.5	0.45

Methodology

Uncontrolled Emissions (tons/yr)= Grain Loading(gr/dscf) *Air Flow rate(acfm) *(60min/hr)* (lb/7000gr)* 8760 hr/yr * 1ton/2000 lbs.

Contolled Emissions = Uncontrolled Emissions *(1-Control Efficiency).

Appendix A: Emission Calculations
LPG-Propane

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0(T 065-31928-0(T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Sulfur Content = 0.18 grains/100ft^3
6.00	574.43	

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.4	0.4	0.0 *(0.10S)*	14.0	0.5 **TOC value	3.2
Potential Emission in tons/yr	0.1	0.1	0.0	4.0	0.1	0.9

*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu
1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)
(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Appendix A: Emission Calculations
LPG-Butane

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0(T 065-31928-0(T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Sulfur Content = 0.18 grains/100ft^3
6.00	574.43	

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.5	0.5	0.0 *(0.10S)*	15.0	0.6 **TOC value	2.1
Potential Emission in tons/yr	0.1	0.1	0.0	4.3	0.2	0.6

*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.
**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu
1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)
(Source - AP-42 (Supplement B 10/96) page 1.5-1)
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Appendix A: Emission Calculations
LPG-Propane

Company Name: Grede LLC
Address: 2700 East Plum Street, New Castle, Indiana 47362
Plant ID: 065-00007
Permit #: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Sulfur Content = 0.18 grains/100ft^3
6.00	574.43	

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	12,500	0.2	0.9
Potential Emission in tons/yr	3,590	0.1	0.3
Summed Potential Emissions in tons/yr	3,590		
CO2e Total in tons/yr	3,672		

Methodology
The CO2 Emission Factor for Propane is 12500. The CO2 Emission Factor for Butane is 14300.
Emission Factors are from AP 42 (7/08), Table 1.5-1 (SCC #1-02-010-02)
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/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)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

Appendix A: HAP's Emissions Calculations
Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Uncontrolled HAP's																				
Process	Chromium Emissions(tons/yr)	Nickel Emissions (tons/yr)	Arsenic Emissions (tons/yr)	Cadmium Emissions (tons/yr)	Manganese Emissions (tons/yr)	Antimony Emissions (tons/yr)	Lead Emissions (tons/yr)	Dichloro-benzene Emissions (tons/yr)	Hexane Emissions (tons/yr)	Acrolein Emissions (tons/yr)	Benzene Emissions (tons/yr)	Form-aldehyde Emissions (tons/yr)	HCN Emissions (ton/yr)	Xylenes Emissions (tons/yr)	Naphthalene Emissions (tons/yr)	Phenol Emissions (ton/yr)	Toluene Emissions (tons/yr)	Aromatic Amines Emissions (tons/yr)	Aldehyde Emissions (tons/yr)	Total Hap's (tons/yr)
Electric Induction Furnaces	3.10E-02	5.50E-02	1.00E-02	_	2.10E+00	1.60E-01	8.30E-01	_	_	_	_	_	_	_	_	_	_	_	_	3.2
Scrap Preheater	5.60E-05	8.40E-05	_	4.41E-05	1.51E-05	_	2.00E-05	4.81E-05	7.22E-02	_	8.43E-05	_	_	_	_	_	1.36E-04	_	3.01E-03	0.08
Inoculation	1.40E-01	2.50E-01	4.80E-02	_	1.10E+01	6.80E-01	1.40E+00	_	_	_	_	_	_	_	_	_	_	_	_	14
Sand Handling Line 1	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Pouring/Casting Line 1	7.20E-02	1.30E-01	2.50E-02	_	5.80E+00	3.50E-01	7.20E-01	_	_	_	_	_	_	_	_	_	_	_	_	7.1
Castings Cooling Line 1	2.00E-02	4.00E-02	1.00E-02	_	1.93E+00	1.20E-01	2.40E-01	_	_	_	_	_	_	_	_	_	_	_	_	2.4
Shakeout Line 1	5.50E-02	9.60E-02	1.90E-02	_	4.50E+00	2.70E-01	5.50E-01													5.4
Shot Blast 1 & 2	2.90E-01	5.10E-01	9.90E-02	_	2.30E+01	1.40E+00	2.90E+00	_	_	_	_	_	_	_	_	_	_	_	_	28.20
Grinders Line 1	5.90E-05	1.00E-04	2.00E-05	_	4.80E-03	3.00E-04	6.10E-04	_	_	_	_	_	_	_	_	_	_	_	_	0.0059
Sand Handling Line 2	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Pouring/Casting Line 2	7.50E-02	1.30E-01	2.60E-02	_	6.10E+00	3.70E-01	7.60E-01	_	_	_	_	_	_	_	_	_	_	_	_	7.5
Castings Cooling Line 2	2.00E-02	4.40E-02	8.00E-03	_	2.02E+00	1.22E-01	2.54E-01	_	_	_	_	_	_	_	_	_	_	_	_	2.5
Shakeout Line 2	5.70E-02	1.00E-01	2.00E-02	_	4.70E+00	2.80E-01	5.80E-01	_	_	_	_	_	_	_	_	_	_	_	_	5.7
Shot Blast 3	3.00E-01	5.40E-01	1.00E-01	_	2.40E+01	1.50E+00	3.10E+00	_	_	_	_	_	_	_	_	_	_	_	_	29.54
Grinders Mold Line #2	1.00E-04	1.80E-04	3.60E-05	_	8.60E-03	5.20E-04	1.10E-03													0.01
Organic HAP's Pouring,Cooling, &shakeout	_	_	_	_	_	_	_	_	_	9.00E-02	1.47E+01	6.00E-02	2.90E+00	1.57E+00	6.00E-02	1.07E+01	2.29E+00	9.70E-01	6.00E-01	33.98
North Core Sand Mixer &Core Machines	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2.80E-01	0.00E+00				0.28
South Core Sand Mixer&Core Machines	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2.60E-01	0.00E+00	_	_	_	0.26
New Core Sand Mixer & Core Machines	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2.80E-01	0.00E+00	_	_	_	0.28
Propane/LPG/Butane combustion sources	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Core Sand Reclaim System	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Total	1.1	1.90E+00	3.65E-01	4.41E-05	8.52E+01	5.25E+00	1.13E+01	4.81E-05	7.22E-02	0.09	14.71	0.06	2.90	1.57	0.88	10.74	2.29	0.97	0.60	140

Appendix A: HAP's Emissions Calculations
Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Limited Emissions																				
Process	Chromium Emissions(tons/yr)	Nickel Emissions (tons/yr)	Arsenic Emissions (tons/yr)	Cadmium Emissions (tons/yr)	Manganese Emissions (tons/yr)	Antimony Emissions (tons/yr)	Lead Emissions (tons/yr)	Dichloro-benzene Emissions (tons/yr)	Hexane	Acrolein (tons/yr)	Benzene (tons/yr)	Form-aldehyde Emissions (tons/yr)	HCN Emissions (ton/yr)	Xylenes Emissions (tons/yr)	Naphthalene Emissions (tons/yr)	Phenol Emissions (ton/yr)	Toluene Emissions (tons/yr)	Aromatic Amines Emissions (tons/yr)	Aldehyde Emissions (tons/yr)	Total Hap's (tons/yr)
Electric Induction Furnaces	3.10E-02	5.50E-02	1.00E-02	_	2.10E+00	1.60E-01	8.30E-01	_	_	_	_	_	_	_	_	_	_	_	_	3.2
Scrap Preheater	6.03E-05	9.05E-05	_	4.74E-05	1.64E-05	_	2.16E-05	5.17E-05	7.76E-02	_	_	_	_	_	_	_	_	_	_	0.08
Inoculation	1.40E-01	2.50E-01	4.80E-02	_	1.10E+01	6.80E-01	1.40E+00	_	_	_	_	_	_	_	_	_	_	_	_	14
Sand Handling Line 1	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Pouring/Casting Line 1	6.10E-02	1.10E-01	2.10E-02	_	5.00E+00	3.00E-01	6.10E-01	_	_	_	_	_	_	_	_	_	_	_	_	6.10
Castings Cooling Line 1	2.00E-02	4.00E-02	1.00E-02	_	1.65E+00	1.00E-01	2.10E-01	_	_	_	_	_	_	_	_	_	_	_	_	2.0
Shakeout Line 1	4.70E-02	8.20E-02	1.60E-02	_	3.80E+00	2.30E-01	4.70E-01	_	_	_	_	_	_	_	_	_	_	_	_	4.6
Shot Blast 1 & 2	2.50E-01	4.40E-01	8.00E-02	_	1.99E+01	1.19E+00	2.49E+00	_	_	_	_	_	_	_	_	_	_	_	_	24
Grinders Line 1	5.90E-05	1.00E-04	2.00E-05	_	4.80E-03	3.00E-04	6.10E-04	_	_	_	_	_	_	_	_	_	_	_	_	0.0059
Sand Handling Line 2	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Pouring/Casting Line 2	7.50E-02	1.30E-01	2.60E-02	_	6.10E+00	3.70E-01	7.60E-01	_	_	_	_	_	_	_	_	_	_	_	_	7.5
Castings Cooling Line 2	2.00E-02	4.40E-02	8.00E-03	_	2.02E+00	1.22E-01	2.54E-01	_	_	_	_	_	_	_	_	_	_	_	_	2.5
Shakeout Line 2	5.70E-02	1.00E-01	2.00E-02	_	4.70E+00	2.80E-01	5.80E-01	_	_	_	_	_	_	_	_	_	_	_	_	5.7
Shot Blast 3	3.00E-01	5.40E-01	1.00E-01	_	2.40E+01	1.50E+00	3.10E+00	_	_	_	_	_	_	_	_	_	_	_	_	29.54
Grinders Mold Line #2	1.00E-04	1.80E-04	3.60E-05	_	8.60E-03	5.20E-04	1.10E-03													0.01
Organic HAP's Pouring,Cooling, &shakeout	_	_	_	_	_	_	_	_	_	9.00E-02	1.47E+01	6.00E-02	2.90E+00	1.57E+00	6.00E-02	1.07E+01	2.29E+00	9.70E-01	6.00E-01	33.98
North Core Sand Mixer &Core Machines	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2.80E-01	0.00E+00				0.28
South Core Sand Mixer&Core Machines	_	_	_	_	_	_	_	_	_	_	_	_	_	_	2.60E-01	0.00E+00	_	_	_	0.26
New Core Sand Mixer & Core Machines	_	_	_	_	_	_	_	_	_	_					0.05	_	_	_	_	0.05
Propane/LPG/Butane combustion sources	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.00
Core Sand Reclaim System																				0.00
Total	1.00E+00	1.79E+00	3.39E-01	4.74E-05	8.03E+01	4.93E+00	1.07E+01	5.17E-05	7.76E-02	9.00E-02	14.71	6.00E-02	2.90	1.57	0.65	10.74	2.29	0.97	0.60	134

Appendix A: HAP's Emissions Calculations
Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit Number: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 5/23/2012

Process Units		Capacity	Emission Factors (lb/ton)			Emissions (tons/year)			
Emission Unit	ID	ton/hr	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2e
Electric Induction Furnaces	Furnaces #1 - 4	-	na	na	na	na	na	na	na
Charge Handling System	NA	-	na	na	na	na	na	na	na
Inoculation Process	NA	-	na	na	na	na	na	na	na
Line #1 Molding Operation:	Mold Line #1								
Sand Muller	Line #1 Muller		na	na	na	na	na	na	na
Metal Pouring	Line #1 Pouring								
Metal Cooling	Line #1 Cooling	10.25	10	na	na	448.95	na	na	448.95
Shakeout	Line #1 Shakeout								
Mold Punch Up	NA		na	na	na	na	na	na	na
Casting Transfer Operation	NA		na	na	na	na	na	na	na
Casting Finishing	NA		na	na	na	na	na	na	na
Line #2 Molding Operation:	Mold Line #1								
Sand Handling	Line #2 Sand		na	na	na	na	na	na	na
Metal Pouring / Cooling	Line #2 Pour/Cool								
Mold Punch Up / Cooling	Line #2 Punchup/Cool	10.75	10	na	na	470.85	na	na	470.85
Shakeout	Line #2 Shakeout								
Shotblast Machine	#3 Shotblast		na	na	na	na	na	na	na
Grinders	NA		na	na	na	na	na	na	na
Core Sand Mixer	North Sand Mixer		na	na	na	na	na	na	na
Core Sand Mixer	South Sand Mixer	-	na	na	na	na	na	na	na
Core Sand Mixer	New Core Sand Mixer	-	na	na	na	na	na	na	na
Total (ton/ year)									920

Natural Gas Combustion Units		Capacity	Potential	Emission Factors (lb/mmcf)			Emissions (tons/year)			
Emission Unit	ID	mmbtu/hr	mmcf/year	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2e
Natural Gas Fired Scrap Pre-Heater	na	9.2	79.01	120000	2.3	0.64	4,741	0.09	0.03	4,750
LPG - Propane										3,672
Emergency Diesel										19
Total										8,442

Total Source-Wide GHG Emissions	9,362	tons CO2e/ year

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <650 HP)

Company Name: Grede Foundries, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Permit No.: T 065-31928-0007
Reviewer: Anh Nguyen
Date: 05/23/12

Heat Input Capacity Horsepower (hp)	Potential Throughput hp-hr/yr
67.0	33500.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.00220	0.0021	0.031	0.00247	0.00668
Potential Emission in tons/yr	0.04	0.04	0.04	0.52	0.04	0.11

Methodology

Potential Througput (hp-hr/yr) = hp * 500 hr/yr

Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1 and Table 3.4-2
1 hp-hr = 7000 Btu, AP42 (Supplement B 10/96), Table 3.3-1, Footnote a.
Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)
Emission (tons/yr) = [Potential Throughput (hp-/hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)
*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included
The PM10 emission factor is filterable and condensable PM10 combined.
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <650 HP)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).
1 kg = 2.2 lbs

Potential Emission of Total HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.93E+01	7.75E-04	1.55E-04

Summed Potential Emissions in tons/yr	**1.93E+01**
CO2e Total in tons/yr	**19.33**

Grede Foundries, Inc
PSD/Significant Source Modification No.: 065-25741-00007

Permit Reviewer: Anh Nguyen .

Estimated Annual Carbon Monoxide Control Cost

Mold Line 1

Thermal Regenerative Oxidizer

Operation	Operation	Thermal Regenerative Oxidizer Cost	CO Controlled (tons/yr)	Cost/Ton Controlled - Thermal Regenerative
Pouring	Pouring	$ 2,384,240	202.61	$ 11,768
Cooling	Cooling			
Shakeout	Shakeout			
Total	Total	$ 2,384,240		

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
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: Tim Palmer
Grede, LLC
2700 E Plum Street
New Castle, IN 47362

DATE: March 14, 2013

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

SUBJECT: Final Decision
Part 70 Operating Permit Renewal
065-31928-00007

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:
Jeff Hipple, Responsible Official
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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

March 14, 2013

TO: New Castle-Henry County Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Grede, LLC
Permit Number: 065-31928-00007

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	PWAY 3/14/2013 Grede LLC. 065-31928-00007 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Tim Palmer Grede LLC. 2700 E Plum St New Castle IN 47362 (Source CAATS)									
2		Jeff Hipple Grede LLC. 2700 E Plum St New Castle IN 47362 *(RO CAATS)*									
3		Lisa & Joe Hillman 2460 West 650 North Middletown IN 47356 *(Affected Party)*									
4		Mr. Stults 5363 W 300 N Middletown IN 47356 *(Affected Party)*									
5		Linda K. Bentle & Thom Horton & Brigham Robbins 8924 W. 550 N. Middletown IN 47356 *(Affected Party)*									
6		Ms. Nancy Fischer 5587 N 400 W Middletown IN 47356 *(Affected Party)*									
7		Beth & James Solomon 3888 W. 850 N. Middletown IN 47356 *(Affected Party)*									
8		Maynard & Mary Powell 130 N 6th St Middletown IN 47356 *(Affected Party)*									
9		Ms. Kim Bond 5261 N. CR 850 W. Middletown IN 47356 *(Affected Party)*									
10		John & Carolyn Hinton 4767 N. 450 W Middletown IN 47356 *(Affected Party)*									
11		Ferrell 2528 N. CR 500 W. Middletown IN 47356 *(Affected Party)*									
12		Mr & Mrs. Jim Minnick 144 N. 7th Street Middletown IN 47356 *(Affected Party)*									
13		Mr. Don Shaw 3322 W 400 N Middletown IN 47356 (Affected Party)									
14		Frank & Jeff McCrocklin 683 N 8th St Middletown IN 47356 *(Affected Party)*									
15		Eunice & Barb Stevens 6047 N CR 850 W Middletown IN 47356 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	PWAY 3/14/2013 Grede LLC. 31928 (draft/final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		James 9815 N. CR. 300 E. Muncie IN 47303 (Affected Party)									
2		Mr. Ronnie Sowers 818 North 500 West New Castle IN 47362 *(Affected Party)*									
3		Marilyn & Vernon Cherrett 712 North 500 West New Castle IN 47362 *(Affected Party)*									
4		Don Miller 3632 W. CR 100 S New Castle IN 47362 *(Affected Party)*									
5		Jeffrey & Debbie Powell 120 N 600 W New Castle IN 47362 *(Affected Party)*									
6		Mary & Mark Pierce 1512 N 425 W New Castle IN 47362 *(Affected Party)*									
7		Cronk & McCraine Residence 1441 W. CR 100 South New Castle IN 47362 *(Affected Party)*									
8		Mr. Troy Howell 1354 Cadiz Pk New Castle IN 47362 *(Affected Party)*									
9		Mr. James Smith 4808 W SR 234 New Castle IN 47362 *(Affected Party)*									
10		Violet Wells 3828 West Street, Road 38 New Castle IN 47362 *(Affected Party)*									
11		Jack & Walter Thomas 4083 US Highway 35 E New Castle IN 47362 *(Affected Party)*									
12		Mr. & Mrs. Hersel Ankrom 903 Lincoln Avenue New Castle IN 47362 *(Affected Party)*									
13		Gerald & Roberta Haynes 2625 N CR 650 W New Castle IN 47362 (Affected Party)									
14		Mrs. Joyce Thompson 6663 E CR 2005 New Castle IN 47362 *(Affected Party)*									
15		Rose & Thomas Kramer 137 N CR 500 W New Castle IN 47362 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	PWAY 3/14/2013 Grede LLC. 31928 (draft/final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		New Castle City Council and Mayors Office 227 N Main St New Castle IN 47362 (Local Official)									
2		Henry County Board of Commissioners 101 S. Main St New Castle IN 47362 *(Local Official)*									
3		Mr. Jay Cory 478 N. Clover Drive New Castle IN 47362 *(Affected Party)*									
4		Mr. Thomas Lee Clevenger 4005 South Franks Lane Selma IN 47383 *(Affected Party)*									
5		Robert Harris 6110 W. 100 S. Shirley IN 47384 *(Affected Party)*									
6		Marsha & David Gratner P.O. Box 8 Sulphur Springs IN 47388 *(Affected Party)*									
7		Katherine & Stephen Fox PO Box 300 Shirley IN 47384 *(Affected Party)*									
8		New Castle Henry Co Public Library 376 South 15th St, P.O. Box J New Castle IN 47362-1050 *(Library)*									
9		Louis Crowe 3725 S. Memoria Drive New Castle IN 47362 *(Affected Party)*									
10		Belinda & Jeff Goble 5562 W. CR 100 N. New Castle IN 47362 *(Affected Party)*									
11		Ron Elliott 3079 N. CR 650 W New Castle IN 47362 *(Affected Party)*									
12		Henry County Health Department 1201 Race Street, Suite 208 New Castle IN 47362-4653 *(Health Department)*									
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877