



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties
Date: December 12, 2014
From: Matthew Stuckey, Chief
Permits Branch
Office of Air Quality
Source Name: MasterBrand Cabinets Inc.
Permit Level: Title V Renewal
Permit Number: 039-34286-00014
Source Location: 1002 Eisenhower Dr North
Type of Action Taken: Permit Renewal

Notice of Decision: Approval - Effective Immediately

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

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 34286.

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

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

Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

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

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

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

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

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

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

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

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



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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

MasterBrand Cabinets, Inc.
1002 Eisenhower Drive North
Goshen, Indiana 46526

(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.: T039-34286-00014	
Issued by:  Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 12, 2014 Expiration Date: December 12, 2019

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary wood furniture manufacturing operation.

Source Address:	1002 Eisenhower Drive North, Goshen, Indiana 46526
General Source Phone Number:	574-535-9450
SIC Code:	2434 (Wood Kitchen Cabinets)
County Location:	Elkhart
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 Not 1 of 28 Source Categories

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

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

- (a) Woodworking Operations consisting of:
- (1) One (1) woodworking cell, identified as WW1, constructed in 2004, controlled by a 72,000 cubic feet per minute baghouse, identified as CC1, and exhausting either internally or to stack SCC1.
 - (2) One (1) woodworking cell, identified as WW2, constructed in 2001, controlled by a 72,000 cubic feet per minute baghouse, identified as CC2, and exhausting either internally or to stack SCC2.
 - (3) One (1) woodworking cell, identified as WW4, constructed in 2004, controlled by a 46,700 cubic feet per minute baghouse, identified as CC4, and exhausting either internally or to stack SCC4.
 - (4) One (1) woodworking cell, identified as WW5, constructed in 1988, controlled by a 46,700 cubic feet per minute baghouse, identified as CC5, and exhausting either internally or to stack SCC5.
 - (5) One (1) woodworking cell, identified as WW6, constructed in 1989, controlled by a 46,700 cubic feet per minute baghouse, identified as CC6, and exhausting either internally or to stack SCC6.
- (b) Eighteen (18) spray booths C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 with the following descriptions:
- Finishing - Customs Line
- (1) One (1) pre-stain booth, identified as C2, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SC2;

Finishing - Hang Line

- (2) Three (3) hanging line stain booths, identified as H1, H2, and H3, with a total maximum rating of 1,125 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH1, SH2, and SH3;
- (3) Two (2) hanging line sealer booths, identified as H5 and H6, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH5 and SH6;
- (4) Two (2) hanging line topcoat booths, identified as H9 and H10, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks SH9 and SH10;
- (5) One (1) white parts booth identified as H12, with a maximum rating of 75 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks ID SH12a and SH12b;
- (6) One (1) hanging line parts booth identified as H19, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SH19;

Finishing - Flat Line (UV Line)

- (7) One (1) automated stain line, identified as F3, with a maximum capacity of coating 1000 units per hour, utilizing a high volume low pressure spray application, with particulate emissions controlled by dry filters, and exhausting to stacks SF3, SF4a, and SF4b;
- (8) One (1) automated stain line, identified as F9, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing a high volume low pressure spray application system with particulate emissions controlled by dry filters, exhausting to stack SF9;
- (9) Two (2) automated varnish lines, identified as F15 and F38, each with a maximum capacity of coating 1000 units per hour, (2000 total) utilizing an airless spray application, with particulate emissions controlled by water curtain systems, and exhausting to stacks F15 and SF38, respectively;
- (10) One (1) automated varnish line, identified as F23, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF23;
- (11) One (1) automated varnish line, identified as F30, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF30;
- (12) One (1) flat line parts booth, identified as F51, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks SF51a and SF51b;

Finishing - Molding Line

- (13) One (1) parts booth, identified as FM1, with a maximum coating rate of 25 parts per hour, exhausting through stack SFM1. Particulate emissions from the spray guns are controlled by dry filters.

Under the National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (NESHAP) (40 CFR 63, Subpart JJ), the surface coating operations C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 are considered existing units at an existing affected source.

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

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu per hour including the following:
 - (1) Two (2) natural gas fired boilers, identified as B4 and B5, constructed in 2011 (B4) and 2012 (B5), each rated at 1.5 MMBtu per hour and exhausting through stacks SB4 and SB5 respectively. [326 IAC 6-2-4]
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2(e)(2)]
- (c) Eight (8) applying wood and/or PVC veneers using EVA hot melt glue or adhesive, pre-glued wood veneers, or hot stamp foil material. The hot melt glues and adhesives meet the definition of a non-HAP coating, specified in 40 CFR 63, Subpart DDDD as a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds. Under 40 CFR 63, Subpart DDDD, these edge-banding processes are considered existing affected units at an existing affected source.
- (d) Woodworking Operations (Insignificant pursuant to 326 IAC 2-7-21(G)(xxx)) consisting of:
 - (1) One (1) woodworking cell, identified as WW3, constructed in 2001, controlled by a 23,000 cubic feet per minute baghouse, identified as CC3, and exhausting either internally or to stack SCC3. [326 IAC 6-3-2]
 - (2) One (1) woodworking cell, identified as WW7, constructed in 1989, controlled by a 23,000 cubic feet per minute baghouse, identified as CC7, and exhausting either internally or to stack SCC7. [326 IAC 6-3-2]
 - (3) One (1) woodworking cell, identified as WW8, constructed in 1989, controlled by a 19,400 cubic feet per minute baghouse, identified as CC8, and exhausting either internally or to stack SCC8. [326 IAC 6-3-2]
 - (4) One (1) woodworking cell, identified as WW9, constructed in 1987, controlled by a 23,000 cubic feet per minute baghouse, identified as SCC01, and exhausting either internally or to stack SSCC01. [326 IAC 6-3-2]
 - (5) One (1) woodworking cell, identified as WW10, constructed in 1987, controlled by a 34,330 cubic feet per minute baghouse, identified as SCC02, and exhausting either internally or to stack SSCC02. [326 IAC 6-3-2]
 - (6) One (1) woodworking cell, identified as WW11, constructed in 1987, controlled by a 27,400 cubic feet per minute baghouse, identified as SCC04, and exhausting either internally or to stack SSCC04. [326 IAC 6-3-2]
 - (7) One (1) woodworking cell, identified as WW12, constructed in 1989, controlled by

- a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
- (8) One (1) woodworking cell, identified as WW13, constructed in 2005, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
- (9) One (1) woodworking cell, identified as WW14, constructed in 2001, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
- (10) One (1) woodworking cell, identified as WW17, constructed in 1997, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
- (e) Grinding and machining 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 actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2(e)(2)]
- (f) One (1) natural gas fired emergency generator, identified as EG1, constructed in 2003 and manufactured in 2003, with a maximum output of 16 HP.
- This generator is an existing affected source under 40 CFR 63, Subpart ZZZZ.
- (g) One (1) natural gas fired emergency generator, identified as EG2, constructed in 2014 and manufactured in 2014, with a maximum output of 27 HP.
- This generator is an affected source under 40 CFR 60, Subpart JJJJ and a new affected source under 40 CFR 63, Subpart ZZZZ.
- (h) One (1) UV glazing process, constructed in 2014, consisting of:
- (1) One (1) surface coating process, applied by syringe, with a maximum throughput of 0.075 gallons per hour.
- (2) One (1) natural gas fired curing oven, with a maximum heat input of 0.5 MMBtu per hour.

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, T039-34286-00014, 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 April 15 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 or Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

- (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 T039-34286-00014 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 eight (8) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.

- (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

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

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least eight (8) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

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

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

- (a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the

Permittee's copy of this permit; and

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

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

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

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

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

- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

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

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

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

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

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]
Pursuant to 326 IAC 2-6-3(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(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

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

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

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the Part 70 permit.

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

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

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

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

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

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

- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

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

- (d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:
 - (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

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

- (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.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1

FACILITY OPERATION CONDITIONS

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

Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu per hour including the following:
 - (1) Two (2) natural gas fired boilers, identified as B4 and B5, constructed in 2011 (B4) and 2012 (B5), each rated at 1.5 MMBtu per hour and exhausting through stacks SB4 and SB5, respectively. [326 IAC 6-2-4]

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

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

D.1.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), PM emissions from the two (2) boilers, each with a maximum heat input capacity of 1.5 MMBtu per hour, identified as B4 and B5, shall not exceed 0.60 pound per MMBtu of heat input.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

(a) Woodworking Operations consisting of:

- (1) One (1) woodworking cell, identified as WW1, constructed in 2004, controlled by a 72,000 cubic feet per minute baghouse, identified as CC1, and exhausting either internally or to stack SCC1.
- (2) One (1) woodworking cell, identified as WW2, constructed in 2001, controlled by a 72,000 cubic feet per minute baghouse, identified as CC2, and exhausting either internally or to stack SCC2.
- (3) One (1) woodworking cell, identified as WW4, constructed in 2004, controlled by a 46,700 cubic feet per minute baghouse, identified as CC4, and exhausting either internally or to stack SCC4.
- (4) One (1) woodworking cell, identified as WW5, constructed in 1988, controlled by a 46,700 cubic feet per minute baghouse, identified as CC5, and exhausting either internally or to stack SCC5.
- (5) One (1) woodworking cell, identified as WW6, constructed in 1989, controlled by a 46,700 cubic feet per minute baghouse, identified as CC6, and exhausting either internally or to stack SCC6.

Insignificant Activities

(d) Woodworking Operations (Insignificant pursuant to 326 IAC 2-7-21(G)(xxx)) consisting of:

- (1) One (1) woodworking cell, identified as WW3, constructed in 2001, controlled by a 23,000 cubic feet per minute baghouse, identified as CC3, and exhausting either internally or to stack SCC3.
- (2) One (1) woodworking cell, identified as WW7, constructed in 1989, controlled by a 23,000 cubic feet per minute baghouse, identified as CC7, and exhausting either internally or to stack SCC7.
- (3) One (1) woodworking cell, identified as WW8, constructed in 1989, controlled by a 19,400 cubic feet per minute baghouse, identified as CC8, and exhausting either internally or to stack SCC8.
- (4) One (1) woodworking cell, identified as WW9, constructed in 1987, controlled by a 23,000 cubic feet per minute baghouse, identified as SCC01, and exhausting either internally or to stack SCCC01.
- (5) One (1) woodworking cell, identified as WW10, constructed in 1987, controlled by a 34,330 cubic feet per minute baghouse, identified as SCC02, and exhausting either internally or to stack SCCC02.
- (6) One (1) woodworking cell, identified as WW11, constructed in 1987, controlled by a 27,400 cubic feet per minute baghouse, identified as SCC04, and exhausting either internally or to stack SCCC04.
- (7) One (1) woodworking cell, identified as WW12, constructed in 1989, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]

- (8) One (1) woodworking cell, identified as WW13, constructed in 2005, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
 - (9) One (1) woodworking cell, identified as WW14, constructed in 2001, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
 - (10) One (1) woodworking cell, identified as WW17, constructed in 1997, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
- (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

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

D.2.1 PSD Minor Limit [326 IAC 2-2]

Pursuant to Minor Source Modification No. 039-13961-00014, issued on April 24, 2001, Minor Source Modification No. 039-17118-00014, issued on June 4, 2003, and as revised by Permit Renewal No. T039-34286-00014, PM, PM10, and PM2.5 emissions from the entire source shall each be less than 250 tons per twelve (12) consecutive month period. This limitation includes equipment listed in sections D.1 through D.4. To comply with this limit, the total PM, PM10, and PM2.5 emissions from the woodworking facilities identified as, WW1 through WW14 and WW17, shall not exceed the limits specified in the following table:

Emission Unit	ID	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
Woodworking Cell	WW1	1.36	1.36	1.36
Woodworking Cell	WW2	1.36	1.36	1.36
Woodworking Cell	WW3	0.44	0.44	0.44
Woodworking Cell	WW4	0.88	0.88	0.88
Woodworking Cell	WW5	0.88	0.88	0.88
Woodworking Cell	WW6	0.88	0.88	0.88
Woodworking Cell	WW7	0.44	0.44	0.44
Woodworking Cell	WW8	0.37	0.37	0.37
Woodworking Cell	WW9	0.44	0.44	0.44
Woodworking Cell	WW10	0.65	0.65	0.65
Woodworking Cell	WW11	0.52	0.52	0.52
Woodworking Cell*	WW12	3.84	3.84	3.84
Woodworking Cell*	WW13			
Woodworking Cell*	WW14			
Woodworking Cell*	WW17			

*Emissions from these units are controlled by the one baghouse (CC10)

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide PM, PM10, and PM2.5 emissions to less than 250 tons per year, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

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

Pursuant to 326 IAC 6-3-2, the particulate from the woodworking cells identified as, WW1 through WW14 and WW17, shall be limited by the following:

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

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

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.2.4 Particulate Control

Pursuant to Part 70 Operating Permit T039-6029-00014, issued on December 22, 1998, Significant Source Modification No. 039-17310-00014, issued on September 26, 2003; Significant Permit Modification No. 039-17815-00014, issued on October 17, 2003, and in order to comply with Conditions D.2.1 and D.2.2, the baghouses and dust collectors for particulate control shall be in operation and control emissions from the woodworking cells, identified as, WW1 through WW14 and WW17, at all times that the woodworking cells are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)][40 CFR 64]

D.2.5 Visible Emissions Notations

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

D.2.6 Broken or Failed Bag Detection

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

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

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

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

D.2.7 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.5, the Permittee shall maintain records of daily visible emission notations of the woodworking baghouse and dust collector stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition

SECTION D.3

FACILITY OPERATION CONDITIONS

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

(b) Eighteen (18) spray booths C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 with the following descriptions:

Finishing - Customs Line

(1) One (1) pre-stain booth, identified as C2, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SC2;

Finishing - Hang Line

(2) Three (3) hanging line stain booths, identified as H1, H2, and H3, with a total maximum rating of 1,125 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH1, SH2, and SH3;

(3) Two (2) hanging line sealer booths, identified as H5 and H6, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH5 and SH6;

(4) Two (2) hanging line topcoat booths, identified as H9 and H10, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks SH9 and SH10;

(5) One (1) white parts booth identified as H12, with a maximum rating of 75 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks ID SH12a and SH12b;

(6) One (1) hanging line parts booth identified as H19, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SH19;

Finishing - Flat Line (UV Line)

(7) One (1) automated stain line, identified as F3, with a maximum capacity of coating 1000 units per hour, utilizing a high volume low pressure spray application, with particulate emissions controlled by dry filters, and exhausting to stacks SF3, SF4a, and SF4b;

(8) One (1) automated stain line, identified as F9, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing a high volume low pressure spray application system with particulate emissions controlled by dry filters, exhausting to stack SF9;

(9) Two (2) automated varnish lines, identified as F15 and F38, each with a maximum capacity of coating 1000 units per hour, (2000 total) utilizing an airless spray application, with particulate emissions controlled by water curtain systems, and exhausting to stacks F15 and SF38, respectively;

(10) One (1) automated varnish line, identified as F23, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF23;

(11) One (1) automated varnish line, identified as F30, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to

stack SF30;

(12) One (1) flat line parts booth, identified as F51, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks SF51a and SF51b;

Finishing - Molding Line

(13) One (1) parts booth, identified as FM1, with a maximum coating rate of 25 parts per hour, exhausting through stack SFM1. Particulate emissions from the spray guns are controlled by dry filters.

Under the National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (NESHAP) (40 CFR 63, Subpart JJ), the surface coating operations C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 are considered existing units at an existing affected source.

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

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

D.3.1 PSD and Emission Offset Limit [326 IAC 2-2][326 IAC 2-3]

- (a) Pursuant to Minor Source Modification No. 039-13961-00014, issued on April 24, 2001, Minor Source Modification No. 039-17118-00014, issued on June 4, 2003, and as revised by Permit Renewal No. T039-34286-00014, PM, PM10, and PM2.5 emissions from the entire source shall each be less than 250 tons per twelve (12) consecutive month period. This limitation includes equipment listed in sections D.1 through D.4. To comply with this limit, the total PM, PM10, and PM2.5 emissions from the spray booths, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, F51, and FM1 shall not exceed the limits specified in the following table:

Emission Unit ID	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
C2	0.10	0.10	0.10
H1	4.57	4.57	4.57
H2	4.57	4.57	4.57
H3	4.57	4.57	4.57
H5	1.42	1.42	1.42
H6	1.42	1.42	1.42
H9	2.12	2.12	2.12
H10	2.12	2.12	2.12
H12	0.82	0.82	0.82
H19	0.13	0.13	0.13
F3	1.73	1.73	1.73
F9	1.73	1.73	1.73
F15	4.68	4.68	4.68
F23	3.33	3.33	3.33
F30	3.45	3.45	3.45
F38	3.76	3.76	3.76
F51	0.13	0.13	0.13
FM1	2.37	2.37	2.37

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide PM, PM10, and PM2.5 emissions to less than 250 tons per year, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

- (b) Pursuant to Minor Source Modification No. 039-13961-00014, issued on April 24, 2001, Minor Source Modification No. 039-17118-00014, issued on June 4, 2003, and Minor Permit Modification No. 039-17224-00014, issued on July 7, 2003, the VOC input, including coatings, dilution solvents, and cleaning solvents to surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51 shall be less than 248.8 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall limit VOC emissions from surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51 to less than 248.8 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51.

- (c) Pursuant to Significant Source Modification No. 039-17310-00014, issued on September 26, 2003, and Significant Permit Modification No. 039-17815-00014, issued on October 17, 2003, the VOC input, including coatings, dilution solvents, and cleaning solvents, to surface coating booths H1, H2, H3, H5, H6, H9, and H10 shall be limited to less than 250 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall limit VOC emissions from surface coating booths H1, H2, H3, H5, H6, H9, and H10 to less than 250 tons of VOC per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to surface coating booths H1, H2, H3, H5, H6, H9, and H10.

- (d) Pursuant to Minor Source Modification No. 039-23626-00014, issued on November 2, 2006, and as revised by Permit Renewal No. T039-34286-00014, VOC input, including coatings, dilution solvents, and cleaning solvents, to booth FM1 shall be less than 40 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall limit VOC emissions from booth FM1 to less than 40 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to booth FM1.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, the surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

Airless Spray Application
Air Assisted Airless Spray Application
Electrostatic Spray Application
Electrostatic Bell or Disc Application
Heated Airless Spray Application
Roller Coating
Brush or Wipe Application
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

D.3.3 Particulate Matter (PM) [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the surface coating operations shall be controlled by dry particulate filters, waterwashes, or an equivalent control device, and the Permittee shall operate the control devices in accordance with manufacturer's specifications.

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.3.5 Volatile Organic Compounds (VOC)

Compliance with the VOC limitation contained in Conditions D.3.1(b) (c), and (d) shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets or Certified Product Data Sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4

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

D.3.6 Monitoring

(a) Particulate from all of the surface coating operations at the source, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 shall be controlled by dry particulate filters, waterwashes, or an equivalent control device, and the Permittee shall operate the control devices in accordance with manufacturer's specifications. Each of these surface coating operations have applicable compliance monitoring conditions as specified below:

The Permittee shall implement an operator training program.

- (1) All operators that perform surface coating operations using spray equipment or booth maintenance shall be trained in the proper set-up and operation of the particulate control systems. All existing operators shall be trained within 60 days of the date of permit issuance. All new operators shall be trained upon hiring or transfer.
- (2) Training shall include proper filter alignment, filter inspection and maintenance, water wash inspection and maintenance, and troubleshooting practices. The training program shall be written and retained on site. The training program shall include a description of the methods to be used at the completion of initial and refresher training to demonstrate and document successful completion. Copies of the training program, the list of trained operators and training records shall be maintained on site.
- (3) All operators shall be given refresher training annually.

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

D.3.7 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.3.1(b), (c), and (d) the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.3.1(b), (c), and (d). Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) The VOC content of each coating material and solvent used;
 - (2) The amount of coating material and solvent less water used, including those added to coatings and those used for cleanup, on a monthly basis;
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (3) The cleanup solvent usage for each month;
 - (4) The total VOC usage for each month; and
 - (5) The weight of VOCs emitted for each compliance period.
- (b) To document the compliance status with Condition D.3.6, the Permittee shall maintain copies of the training program, the list of trained operators, and training records shall be maintained on site.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition

D.3.8 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.3.1(b), (c), and (d) shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee 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).

SECTION D.4

FACILITY OPERATION CONDITIONS

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

Insignificant Activities

- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2(e)(2)]
- (e) Grinding and machining 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 actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2(e)(2)]

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

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

D.4.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), the particulate from the Insignificant Activities related to grinding, machining, brazing and welding shall be limited to five hundred fifty-one thousandths (0.551) pound per hour.

SECTION E.1 FACILITY OPERATION CONDITIONS

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

Insignificant Activities

- (c) Eight (8) edge-banding processes applying wood and/or PVC veneers using EVA hot melt glue or adhesive, pre-glued wood veneers, or hot stamp foil material. The hot melt glues and adhesives meet the definition of a Non-HAP coating, specified in 40 CFR 63, Subpart DDDD as a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds. Under 40 CFR 63, Subpart DDDD, these edge-banding processes are considered an existing affected source at a PCWP manufacturing facility.

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

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

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements:

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

- (a) Pursuant to 40 CFR 63.800, 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 unless otherwise specified in 40 CFR 63, Subpart DDDD (National Emission Standards for Plywood and Composite Wood Products), included in this permit as Attachment A, for the eight (8) Edge-banding process applying veneer to wood panels.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products [40 CFR 63, Subpart DDDD]

Pursuant to 40 CFR Part 63, Subpart DDDD, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart DDDD (included as Attachment B to this permit), for the insignificant edge-banding operations and all other activities associated with the production of plywood or composite wood products as specified in 40 CFR Part 63, Subpart DDDD:

- (1) 40 CFR 63.2230
- (2) 40 CFR 63.2231 (a) (b)
- (3) 40 CFR 63.2232 (a) (b) (e)
- (4) 40 CFR 63.2233 (b) (d)
- (5) 40 CFR 63.2250 (a) (b)
- (6) 40 CFR 63.2252

SECTION E.2

FACILITY OPERATION CONDITIONS

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

- (b) Eighteen (18) spray booths C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 with the following descriptions:

Finishing - Customs Line

- (1) One (1) pre-stain booth, identified as C2, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SC2;

Finishing - Hang Line

- (2) Three (3) hanging line stain booths, identified as H1, H2, and H3, with a total maximum rating of 1,125 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH1, SH2, and SH3;
- (3) Two (2) hanging line sealer booths, identified as H5 and H6, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH5 and SH6;
- (4) Two (2) hanging line topcoat booths, identified as H9 and H10, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks SH9 and SH10;
- (5) One (1) white parts booth identified as H12, with a maximum rating of 75 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks ID SH12a and SH12b;
- (6) One (1) hanging line parts booth identified as H19, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SH19;

Finishing - Flat Line (UV Line)

- (7) One (1) automated stain line, identified as F3, with a maximum capacity of coating 1000 units per hour, utilizing a high volume low pressure spray application, with particulate emissions controlled by dry filters, and exhausting to stacks SF3, SF4a, and SF4b;
- (8) One (1) automated stain line, identified as F9, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing a high volume low pressure spray application system with particulate emissions controlled by dry filters, exhausting to stack SF9;
- (9) Two (2) automated varnish lines, identified as F15 and F38, each with a maximum capacity of coating 1000 units per hour, (2000 total) utilizing an airless spray application, with particulate emissions controlled by water curtain systems, and exhausting to stacks F15 and SF38, respectively;
- (10) One (1) automated varnish line, identified as F23, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF23;
- (11) One (1) automated varnish line, identified as F30, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF30;

- (12) One (1) flat line parts booth, identified as F51, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks SF51a and SF51b;

Finishing - Molding Line

- (13) One (1) parts booth, identified as FM1, with a maximum coating rate of 25 parts per hour, exhausting through stack SFM1. Particulate emissions from the spray guns are controlled by dry filters.

Under the National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (NESHAP) (40 CFR 63, Subpart JJ), the surface coating operations C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 are considered existing units at an existing affected source.

(The information describing the process contained in this facility 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.2.1 General Provisions Relating to NESHAP JJ [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.800, 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 for the surface coating operations identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, F51, and FM1, as specified in Table 1 of 40 CFR Part 63, Subpart JJ in accordance with schedule in 40 CFR 63, Subpart JJ.

E.2.2 NESHAP Subpart JJ Requirements [40 CFR Part 63, Subpart JJ] [326 IAC 20-14]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart JJ (included as Attachment A to this permit), which are incorporated by reference as 326 IAC 20-14, for the surface coating operations identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, F51, and FM1:

- (1) 40 CFR 63.800 (except (f) and (g))
- (2) 40 CFR 63.801
- (3) 40 CFR 63.802 (except (b))
- (4) 40 CFR 63.803
- (5) 40 CFR 63.804 (except (d) and (e))
- (6) 40 CFR 63.805 (except (d)(7), (d)(9), (e)(4), and (e)(6))
- (7) 40 CFR 63.806
- (8) 40 CFR 63.807
- (9) 40 CFR 63.808
- (10) Table 1
- (11) Table 2
- (12) Table 3
- (13) Table 4
- (14) Table 5
- (15) Table 6

SECTION E.3

OPERATION CONDITIONS

Facility Description:

Insignificant Activities:

- (g) One (1) natural gas fired emergency generator, identified as EG2, constructed in 2014 and manufactured in 2014, with a maximum output of 27 HP.

This generator is an affected source under 40 CFR 60, Subpart JJJJ and a new affected source under 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

E.3.1 General Provisions Relating to NSPS [40 CFR 60, Subpart A] [326 IAC 12-1]

- (a) Pursuant to 40 CFR 60.4246, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart JJJJ.

- (b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

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

E.3.2 New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart JJJJ, the Permittee shall comply with the following provisions of 40 CFR 60, Subpart JJJJ (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 12, for the natural gas emergency generator EG2, manufactured on or after January 1, 2009 and with a maximum output of greater than 25 HP:

- (1) 40 CFR 60.4230(a)(4)(iv)
- (2) 40 CFR 60.4233(d)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4325
- (5) 40 CFR 60.4236
- (6) 40 CFR 60.4237(c)
- (7) 40 CFR 60.4243(d)
- (8) 40 CFR 60.4245(b)
- (9) 40 CFR 60.4248
- (10) Table 3

SECTION E.4

OPERATION CONDITIONS

Facility Description:

Insignificant Activities:

- (f) One (1) natural gas fired emergency generator, identified as EG1, constructed in 2003 and manufactured in 2003, with a maximum output of 16 HP.

This generator is an existing affected source under 40 CFR 63, Subpart ZZZZ.

- (g) One (1) natural gas fired emergency generator, identified as EG2, constructed in 2014 and manufactured in 2014, with a maximum output of 27 HP.

This generator is an affected source under 40 CFR 60, Subpart JJJJ and a new affected source under 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

E.4.1 General Provisions Relating to NESHAP [40 CFR 63, Subpart A] [326 IAC 20-1]

- (a) Pursuant to 40 CFR 63.6580, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR 63, Subpart ZZZZ, for emergency generator G2.

- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

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

E.4.2 National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

- (a) The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment D of this permit), which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ, for the natural gas emergency generator (EG1):

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(ii)
- (4) 40 CFR 63.6595(a)(1)
- (5) 40 CFR 63.6602
- (6) 40 CFR 63.6605

- (7) 40 CFR 63.6625(e)
- (8) 40 CFR 63.6640(f)
- (9) 40 CFR 63.6645(a)(5)
- (10) 40 CFR 63.6655(e)
- (11) 40 CFR 63.6660
- (12) 40 CFR 63.6665
- (13) Table 2c
- (14) Table 8

(b) The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment D of this permit), which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ, for the natural gas emergency generator EG2:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(c)(7)
- (4) 40 CFR 63.6665
- (5) 40 CFR 63.6670
- (6) 40 CFR 63.6675

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

Source Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
Part 70 Permit No.: T039-34286-00014

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: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
Part 70 Permit No.: T039-34286-00014

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) daytime 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 MANAGEMENT
 COMPLIANCE AND ENFORCEMENT BRANCH**

**PART 70 OPERATING PERMIT
 Semi-Annual Report**

VOC and VHAP usage - Wood Furniture NESHAP

Source Name: MasterBrand Cabinets, Inc.
 Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
 Part 70 Permit No.: T039-34286-00014
 Facility: Surface Coating
 Parameter: VOC and VHAPs - NESHAP
 Limit: (1) Finishing operations -1.0 lb VHAP/lb Solids
 (2) Thinners used for on-site formulation of washcoats, basecoats and enamels - 3% VHAP content by weight
 (3) All other thinner mixtures - 10% VHAP content by weight
 (4) Foam adhesives meeting the upholstered seating flammability requirements - 1.8 lb VHAP/lb Solids
 (5) All other contact adhesives - 1.0 lb VHAP/lb Solids
 (6) Strippable spray booth material - 0.8 pounds VOC per pound solids

6-MONTH PERIOD: _____ YEAR: _____

Month	Finishing Operations (lb VHAP/lb Solid)	Thinners used for on-site formulation (% by weight)	All other thinner mixtures (% by weight)	Foam adhesives (upholstered) (lb VHAP/lb Solid)	Contact adhesives (lb VHAP/lb Solid)	Strippable spray booth material (lb VOC/lb Solid)

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
Part 70 Permit No.: T039-34286-00014
Facility: Surface coating operations C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51.
Parameter: Volatile Organic Compounds (VOC)
Limit: The VOC input, including coatings, dilution solvents, and cleaning solvents to surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51 shall be less than 248.8 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: MasterBrand Cabinets, Inc.
 Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
 Part 70 Permit No.: T039-34286-00014
 Facility: Surface coating booths H1, H2, H3, H5, H6, H9, and H10
 Parameter: Volatile Organic Compounds (VOC)
 Limit: The VOC input, including coatings, dilution solvents, and cleaning solvents, to surface coating booths H1, H2, H3, H5, H6, H9, and H10 shall be limited to less than 250 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
Part 70 Permit No.: T039-34286-00014
Facility: Booth FM1.
Parameter: Volatile Organic Compounds (VOC)
Limit: VOC input, including coatings, dilution solvents, and cleaning solvents, to booth FM1 shall be less than 40 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

- 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: MasterBrand Cabinets, Inc.
 Source Address: 1002 Eisenhower Drive North, Goshen, Indiana 46526
 Part 70 Permit No.: T039-34286-00014

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**Attachment A
to a Part 70 Operating Permit No. T039-34286-00014**

[Downloaded from the eCFR on September 10, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart JJ—National Emission Standards for Wood Furniture Manufacturing Operations

Source: 60 FR 62936, Dec. 7, 1995, unless otherwise noted.

§ 63.800 Applicability.

(a) The affected source to which this subpart applies is each facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source as defined in 40 CFR part 63, subpart A, § 63.2. The owner or operator of a source that meets the definition for an incidental wood furniture manufacturer shall maintain purchase or usage records demonstrating that the source meets the definition in § 63.801 of this subpart, but the source shall not be subject to any other provisions of this subpart.

(b) A source that complies with the limits and criteria specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section is an area source for the purposes of this subpart and is not subject to any other provision of this rule, provided that: In the case of paragraphs (b)(1) and (b)(2), finishing materials, adhesives, cleaning solvents and washoff solvents used for wood furniture or wood furniture component manufacturing operations account for at least 90 percent of annual HAP emissions at the plant site, and if the plant site has HAP emissions that do not originate from the listed materials, the owner or operator shall keep any records necessary to demonstrate that the 90 percent criterion is being met. A source that initially relies on the limits and criteria specified in paragraphs (b)(1), (b)(2), and (b)(3) to become an area source, but subsequently exceeds the relevant limit (without first obtaining and complying with other limits that keep its potential to emit hazardous air pollutants below major source levels), becomes a major source and must comply thereafter with all applicable provisions of this subpart starting on the applicable compliance date in § 63.800. Nothing in this paragraph (b) is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(1) The owner or operator of the source uses no more than 250 gallons per month, for every month, of coating, gluing, cleaning, and washoff materials at the source, including materials used for source categories other than wood furniture (surface coating), but excluding materials used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining motor vehicles operated by the facility, or the use of toxic chemicals contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion). The owner or operator shall maintain records of the total gallons of coating, gluing, cleaning, and washoff materials used each month, and upon request submit such records to the Administrator. These records shall be maintained for five years.

(2) The owner or operator of the source uses no more than 3,000 gallons per rolling 12-month period, for every 12-month period, of coating, gluing, cleaning, and washoff materials at the source, including materials used for source categories other than wood furniture (surface coating), but excluding materials used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining motor vehicles operated by the facility, or the use of toxic chemicals contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion). A rolling 12-month period includes the previous 12 months of operation. The owner or operator of the source shall maintain records of the total gallons of coating, gluing, cleaning, and washoff materials used each month and the total gallons used each previous month, and upon request submit such records to the Administrator. Because records are needed over the

previous set of 12 months, the owner or operator shall keep monthly records beginning no less than one year before the compliance date specified in § 63.800(e). Records shall be maintained for five years.

(3) The source emits no more than 4.5 Mg (5 tons) of any one HAP per rolling 12-month period and no more than 11.4 Mg (12.5 tons) of any combination of HAP per rolling 12-month period, and at least 90 percent of the plantwide emissions per rolling 12-month period are associated with the manufacture of wood furniture or wood furniture components.

(c) This subpart does not apply to research or laboratory facilities as defined in § 63.801.

(d) This subpart does not apply to any surface coating or coating operation that meets any of the criteria of paragraphs (d)(1) through (4) of this section.

(1) Surface coating of metal parts and products other than metal components of wood furniture that meets the applicability criteria for miscellaneous metal parts and products surface coating (subpart MMMM of this part).

(2) Surface coating of plastic parts and products other than plastic components of wood furniture that meets the applicability criteria for plastic parts and products surface coating (subpart PPPP of this part).

(3) Surface coating of wood building products that meets the applicability criteria for wood building products surface coating (subpart QQQQ of this part). The surface coating of millwork and trim associated with cabinet manufacturing are subject to subpart JJ.

(4) Surface coating of metal furniture that meets the applicability criteria for metal furniture surface coating (subpart RRRR of this part). Surface coating of metal components of wood furniture performed at a wood furniture or wood furniture component manufacturing facility are subject to subpart JJ.

(e) Owners or operators of affected sources shall also comply with the requirements of subpart A of this part (General Provisions), according to the applicability of subpart A to such sources, as identified in Table 1 of this subpart.

(f) The compliance date for existing affected sources that emit less than 50 tons per year of HAP in 1996 is December 7, 1998. The compliance date for existing affected sources that emit 50 tons or more of hazardous air pollutants in 1996 is November 21, 1997. The owner or operator of an existing area source that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source that is subject to this subpart shall comply with this subpart one year after becoming a major source.

(g) Existing affected sources shall be in compliance with § 63.802(a)(4) and § 63.803(h) no later than November 21, 2014. The owner or operator of an existing area source that increases its emissions of (or its potential to emit) hazardous air pollutants (HAP) such that the source becomes a major source that is subject to this subpart shall comply with this subpart 1 year after becoming a major source.

(h) New affected sources must comply with the provisions of this standard immediately upon startup or by December 7, 1995, whichever is later. New area sources that become major sources shall comply with the provisions of this standard immediately upon becoming a major source.

(i) Reconstructed affected sources are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment (e.g., incinerators, carbon adsorbers, etc.) are not considered in determining whether the facility has been reconstructed, unless the control equipment is required as part of the process (e.g., product recovery). Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs. For example, an affected source may convert to waterborne coatings to meet the requirements of this subpart. At most facilities, this conversion will require the replacement of existing storage tanks, mix equipment, and transfer lines. The cost of replacing the equipment is not considered in determining whether the facility has been reconstructed.

(j) If the owner or operator, in accordance with 40 CFR 63.804, uses a control system as a means of limiting emissions, in response to an action to enforce the standards set forth in this subpart, you may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined in 40 CFR 63.2. Appropriate penalties may be assessed, however, if the respondent fails to meet its burden of proving

all the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a limit, the owner or operator must timely meet the notification requirements in paragraph (j)(2) of this section, and must prove by a preponderance of evidence that:

(i) The excess emissions:

(A) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner; and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(D) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(iv) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment, and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(2) *Notification.* The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than 2 business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (h)(1) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

§ 63.801 Definitions.

(a) All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A (General Provisions) of this part.

Adhesive means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means. Under this subpart, adhesives shall not be considered coatings or finishing materials. Products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate shall not be considered adhesives under this subpart.

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative.

Aerosol adhesive means an adhesive that is dispensed from a pressurized container as a suspension of fine solid or liquid particles in gas.

Affected source means a wood furniture manufacturing facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source as defined in 40 CFR part 63.2, excluding sources that meet the criteria established in § 63.800(a), (b) and (c) of this subpart.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Alternative method means any method of sampling and analyzing for an air pollutant that is not a reference or equivalent method but has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for a determination of compliance.

As applied means the HAP and solids content of the coating or contact adhesive that is actually used for coating or gluing the substrate. It includes the contribution of materials used for in-house dilution of the coating or contact adhesive.

Basecoat means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials, and is usually topcoated for protection.

Baseline conditions means the conditions that exist prior to an affected source implementing controls, such as a control system.

Building enclosure means a building housing a process that meets the requirements of a temporary total enclosure. The EPA Method 204E is used to identify all emission points from the building enclosure and to determine which emission points must be tested. For additional information see *Guidelines for Determining Capture Efficiency*, January 1994. Docket No. A-93-10, Item No. IV-B-1.

Capture device means a hood, enclosed room, floor sweep, or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a pollution control device such as an incinerator or carbon adsorber.

Capture efficiency means the fraction of all organic vapors generated by a process that are directed to a control device.

Certified product data sheet (CPDS) means documentation furnished by coating or adhesive suppliers or an outside laboratory that provides:

(1) The VHAP content of a finishing material, contact adhesive, or solvent, by percent weight, measured using the EPA Method 311 (as promulgated in this subpart), or an equivalent or alternative method (or formulation data if the coating meets the criteria specified in § 63.805(a));

(2) The solids content of a finishing material or contact adhesive by percent weight, determined using data from the EPA Method 24, or an alternative or equivalent method (or formulation data if the coating meets the criteria specified in § 63.805 (a)); and

(3) The density, measured by EPA Method 24 or an alternative or equivalent method. Therefore, the reportable VHAP content shall represent the maximum aggregate emissions potential of the finishing material, adhesive, or solvent in concentrations greater than or equal to 1.0 percent by weight or 0.1 percent for VHAP that are carcinogens, as defined by the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR part 1910), as formulated. Only VHAP present in concentrations greater than or equal to 1.0 percent by weight, or 0.1 percent for VHAP that are carcinogens, must be reported on the CPDS. The purpose of the CPDS is to assist the affected source in demonstrating compliance with the emission limitations presented in § 63.802.

NOTE: Because the optimum analytical conditions under EPA Method 311 vary by coating, the coating or adhesive supplier may also choose to include on the CPDS the optimum analytical conditions for analysis of the coating, adhesive, or solvent using EPA Method 311. Such information may include, but not be limited to, separation column, oven temperature, carrier gas, injection port temperature, extraction solvent, and internal standard.)

Cleaning operations means operations in which organic HAP solvent is used to remove coating materials or adhesives from equipment used in wood furniture manufacturing operations.

Coating means a protective, decorative, or functional film applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks, and temporary protective coatings. Aerosol spray paints used for touch-up and repair are not considered coatings under this subpart.

Coating application station means the part of a coating operation where the coating is applied, e.g., a spray booth.

Coating operation means those activities in which a coating is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

Coating solids (or solids) means the part of the coating which remains after the coating is dried or cured; solids content is determined using data from the EPA Method 24, or an equivalent or alternative method.

Compliant coating/contact adhesive means a finishing material, contact adhesive, or strippable booth coating that meets the emission limits specified in Table 3 of this subpart.

Contact adhesive means an adhesive that is applied to two substrates, dried, and mated under only enough pressure to result in good contact. The bond is immediate and sufficiently strong to hold pieces together without further clamping, pressure, or airing.

Continuous coater means a finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor. Finishing materials that are not transferred to the part are recycled to a reservoir. Several types of application methods can be used with a continuous coater including spraying, curtain coating, roll coating, dip coating, and flow coating.

Continuous compliance means that the affected source is meeting the emission limitations and other requirements of the rule at all times and is fulfilling all monitoring and recordkeeping provisions of the rule in order to demonstrate compliance.

Control device means any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Includes, but is not limited to, incinerators, carbon adsorbers, and condensers.

Control device efficiency means the ratio of the pollutant released by a control device and the pollutant introduced to the control device.

Control system means the combination of capture and control devices used to reduce emissions to the atmosphere.

Conventional air spray means a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization. Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.

Data quality objective (DQO) approach means a set of approval criteria that must be met so that data from an alternative test method can be used in determining the capture efficiency of a control system. For additional information, see *Guidelines for Determining Capture Efficiency*, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Day means a period of 24 consecutive hours beginning at midnight local time, or beginning at a time consistent with a facility's operating schedule.

Disposed offsite means sending used organic HAP solvent or coatings outside of the facility boundaries for disposal.

Emission means the release or discharge, whether directly or indirectly, of HAP into the ambient air.

Enamel means a coat of colored material, usually opaque, that is applied as a protective topcoat over a basecoat, primer, or previously applied enamel coats. In some cases, another finishing material may be applied as a topcoat over the enamel.

Equipment leak means emissions of VHAP from pumps, valves, flanges, or other equipment used to transfer or apply coatings, adhesives, or organic HAP solvents.

Equivalent method means any method of sampling and analyzing for an air pollutant that has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specific conditions.

Finishing material means a coating used in the wood furniture industry. Such materials include, but are not limited to, stains, basecoats, washcoats, enamels, sealers, and topcoats.

Finishing operation means those operations in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

Foam adhesive means a contact adhesive used for gluing foam to fabric, foam to foam, and fabric to wood.

Gluing operation means those operations in which adhesives are used to join components, for example, to apply a laminate to a wood substrate or foam to fabric.

Incidental wood furniture manufacturer means a major source that is primarily engaged in the manufacture of products other than wood furniture or wood furniture components and that uses no more than 100 gallons per month of finishing material or adhesives in the manufacture of wood furniture or wood furniture components.

Incinerator means, for the purposes of this industry, an enclosed combustion device that thermally oxidizes volatile organic compounds to CO and CO₂. This term does not include devices that burn municipal or hazardous waste material.

Janitorial maintenance means the upkeep of equipment or building structures that is not directly related to the manufacturing process, for example, cleaning of restroom facilities.

Low-formaldehyde means, in the context of a coating or contact adhesive, a product concentration of less than or equal to 1.0 percent formaldehyde by weight, as described in a certified product data sheet for the material.

Lower confidence limit (LCL) approach means a set of approval criteria that must be met so that data from an alternative test method can be used in determining the capture efficiency of a control system. For additional information, see *Guidelines for Determining Capture Efficiency*, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Material safety data sheet (MSDS) means the documentation required for hazardous chemicals by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR part 1910) for a solvent, cleaning material, contact adhesive, coating, or other material that identifies select reportable hazardous ingredients of the material, safety and health considerations, and handling procedures.

Noncompliant coating/contact adhesive means a finishing material, contact adhesive, or strippable booth coating that has a VHAP content (VOC content for the strippable booth coating) greater than the emission limitation presented in Table 3 of this subpart.

Nonporous substrate means a surface that is impermeable to liquids. Examples include metal, rigid plastic, flexible vinyl, and rubber.

Normally closed container means a container that is closed unless an operator is actively engaged in activities such as emptying or filling the container.

Operating parameter value means a minimum or maximum value established for a control device or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit.

Organic HAP solvent means a HAP that is a volatile organic liquid used for dissolving or dispersing constituents in a coating or contact adhesive, adjusting the viscosity of a coating or contact adhesive, or cleaning equipment. When used in a coating or contact adhesive, the organic HAP solvent evaporates during drying and does not become a part of the dried film.

Overall control efficiency means the efficiency of a control system, calculated as the product of the capture and control device efficiencies, expressed as a percentage.

Permanent total enclosure means a permanently installed enclosure that completely surrounds a source of emissions such that all emissions are captured and contained for discharge through a control device. For additional information, see *Guidelines for Determining Capture Efficiency*, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Recycled onsite means the reuse of an organic HAP solvent in a process other than cleaning or washoff.

Reference method means any method of sampling and analyzing for an air pollutant that is published in appendix A of 40 CFR part 60.

Research or laboratory facility means any stationary source whose primary purpose is to conduct research and development to develop new processes and products where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

Responsible official has the meaning given to it in 40 CFR part 70, State Operating Permit Programs (Title V permits).

Sealer means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Special purpose finishing materials that are used in some finishing systems to optimize aesthetics are not sealers.

Solvent means a liquid used in a coating or contact adhesive to dissolve or disperse constituents and/or to adjust viscosity. It evaporates during drying and does not become a part of the dried film.

Stain means any color coat having a solids content by weight of no more than 8.0 percent that is applied in single or multiple coats directly to the substrate. It includes, but is not limited to, nongrain raising stains, equalizer stains, prestains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.

Storage containers means vessels or tanks, including mix equipment, used to hold finishing, gluing, cleaning, or washoff materials.

Strippable spray booth material means a coating that:

- (1) Is applied to a spray booth wall to provide a protective film to receive over spray during finishing operations;
- (2) That is subsequently peeled off and disposed; and
- (3) By achieving (1) and (2) of this definition reduces or eliminates the need to use organic HAP solvents to clean spray booth walls.

Substrate means the surface onto which a coating or contact adhesive is applied (or into which a coating or contact adhesive is impregnated).

Temporary total enclosure means an enclosure that meets the requirements of § 63.805(e)(1) (i) through (iv) and is not permanent, but constructed only to measure the capture efficiency of pollutants emitted from a given source. Additionally, any exhaust point from the enclosure shall be at least four equivalent duct or hood diameters from each natural draft opening. For additional information, see *Guidelines for Determining Capture Efficiency*, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Thinner means a volatile liquid that is used to dilute coatings or contact adhesives (to reduce viscosity, color strength, and solids, or to modify drying conditions).

Topcoat means the last film-building finishing material that is applied in a finishing system.

Touchup and repair means the application of finishing materials to cover minor finishing imperfections.

VHAP means any volatile hazardous air pollutant listed in Table 2 to Subpart JJ.

VHAP of potential concern means any VHAP from the list in table 6 of this subpart.

Volatile organic compound (VOC) means any organic compound which participates in atmospheric photochemical reactions, that is, any organic compound other than those which the Administrator designates as having negligible photochemical reactivity. A VOC may be measured by a reference method, an equivalent method, an alternative method, or by procedures specified under any rule. A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, the owner or operator may exclude the nonreactive organic compounds when determining compliance with a standard. For a list of compounds that the Administrator has designated as having negligible photochemical reactivity, refer to 40 CFR part 51.10.

Washcoat means a transparent special purpose finishing material having a solids content by weight of 12.0 percent by weight or less. Washcoats are applied over initial stains to protect, to control color, and to stiffen the wood fibers in order to aid sanding.

Washoff operations means those operations in which organic HAP solvent is used to remove coating from wood furniture or a wood furniture component.

Wood furniture means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured at any facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components, including, but not limited to, facilities under any of the following standard industrial classification codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712.

Wood furniture component means any part that is used in the manufacture of wood furniture. Examples include, but are not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. However, foam seat cushions manufactured and fabricated at a facility that does not engage in any other wood furniture or wood furniture component manufacturing operation are excluded from this definition.

Wood furniture manufacturing operations means the finishing, gluing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

(b) The nomenclature used in this subpart has the following meaning:

- (1) A_k = the area of each natural draft opening (k) in a total enclosure, in square meters.
- (2) C_c = the VHAP content of a finishing material (c), in kilograms of volatile hazardous air pollutants per kilogram of coating solids (kg VHAP/kg solids), as supplied. Also given in pounds of volatile hazardous air pollutants per pound of coating solids (lb VHAP/lb solids).
- (3) C_{aj} = the concentration of VHAP in gas stream (j) exiting the control device, in parts per million by volume.
- (4) C_{bi} = the concentration of VHAP in gas stream (i) entering the control device, in parts per million by volume.
- (5) C_{di} = the concentration of VHAP in gas stream (i) entering the control device from the affected source, in parts per million by volume.
- (6) C_{fk} = the concentration of VHAP in uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source, in parts per million by volume.
- (7) E = the emission limit achieved by an emission point or a set of emission points, in kg VHAP/kg solids (lb VHAP/lb solids).
- (8) F = the control device efficiency, expressed as a fraction.
- (9) FV = the average inward face velocity across all natural draft openings in a total enclosure, in meters per hour.
- (10) G = the VHAP content of a contact adhesive, in kg VHAP/kg solids (lb VHAP/lb solids), as applied.
- (11) M = the mass of solids in finishing material used monthly, kg solids/month (lb solids/month).
- (12) N = the capture efficiency, expressed as a fraction.
- (13) Q_{aj} = the volumetric flow rate of gas stream (j) exiting the control device, in dry standard cubic meters per hour.
- (14) Q_{bi} = the volumetric flow rate of gas stream (i) entering the control device, in dry standard cubic meters per hour.
- (15) Q_{di} = the volumetric flow rate of gas stream (i) entering the control device from the emission point, in dry standard cubic meters per hour.
- (16) Q_{fk} = the volumetric flow rate of uncontrolled gas stream (k) emitted directly to the atmosphere from the emission point, in dry standard cubic meters per hour.
- (17) $Q_{in\ i}$ = the volumetric flow rate of gas stream (i) entering the total enclosure through a forced makeup air duct, in standard cubic meters per hour (wet basis).
- (18) $Q_{out\ j}$ = the volumetric flow rate of gas stream (j) exiting the total enclosure through an exhaust duct or hood, in standard cubic meters per hour (wet basis).
- (19) R = the overall efficiency of the control system, expressed as a percentage.
- (20) S = the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials.
- (21) W = the amount of solvent, in kilograms (pounds), added to finishing materials during the monthly averaging period.

(22) ac=after the control system is installed and operated.

(23) bc=before control.

(24) C_f = the formaldehyde content of a finishing material (c), in pounds of formaldehyde per gallon of coating (lb/gal).

(25) F_{total} = total formaldehyde emissions in each rolling 12 month period.

(26) G_f = the formaldehyde content of a contact adhesive (g), in pounds of formaldehyde per gallon of contact adhesive (lb/gal).

(27) V_c = the volume of formaldehyde-containing finishing material (c), in gal.

(28) V_g = the volume of formaldehyde-containing contact adhesive (g), in gal.

[60 FR 62936, Dec. 7, 1995, as amended at 62 FR 30260, June 3, 1997; 62 FR 31363, June 9, 1997; 63 FR 71380, Dec. 28, 1998; 76 FR 72072, Nov. 21, 2011]

§ 63.802 Emission limits.

(a) Each owner or operator of an existing affected source subject to this subpart shall:

(1) Limit VHAP emissions from finishing operations by meeting the emission limitations for existing sources presented in Table 3 of this subpart, using any of the compliance methods in § 63.804(a). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in § 63.803(l)(2) for determining styrene and formaldehyde usage.

(2) Limit VHAP emissions from contact adhesives by achieving a VHAP limit for contact adhesives based on the following criteria:

(i) For foam adhesives (contact adhesives used for upholstery operations) used in products that meet the upholstered seating flammability requirements of California Technical Bulletin 116, 117, or 133, the Business and Institutional Furniture Manufacturers Association's (BIFMA's) X5.7, UFAC flammability testing, or any similar requirements from local, State, or Federal fire regulatory agencies, the VHAP content of the adhesive shall not exceed 1.8 kg VHAP/kg solids (1.8 lb VHAP/lb solids), as applied; or

(ii) For all other contact adhesives (including foam adhesives used in products that do not meet the standards presented in paragraph (a)(2)(i) of this section, but excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, the VHAP content of the adhesive shall not exceed 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied.

(3) Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

(4) Limit formaldehyde emissions by complying with the provisions specified in either paragraph (a)(4)(i) or (a)(4)(ii) of this section.

(i) Limit total formaldehyde (F_{total}) use in coatings and contact adhesives to no more than 400 pounds per rolling 12 month period.

(ii) Use coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives, in any wood furniture manufacturing operations.

(b) Each owner or operator of a new affected source subject to this subpart shall:

(1) Limit VHAP emissions from finishing operations by meeting the emission limitations for new sources presented in Table 3 of this subpart using any of the compliance methods in § 63.804(d). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in § 63.803(l)(2) for determining styrene and formaldehyde usage.

(2) Limit VHAP emissions from contact adhesives by achieving a VHAP limit for contact adhesives, excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, of no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied, using either of the compliance methods in § 63.804(e).

(3) Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

(4) Limit formaldehyde emissions by complying with the provisions specified in either paragraph (b)(4)(i) or (b)(4)(ii) of this section.

(i) Limit total formaldehyde (F_{total}) use in coatings and contact adhesives to no more than 400 pounds per rolling 12 month period.

(ii) Use coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives, in any wood furniture manufacturing operations.

(c) At all times, the owner or operator 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. 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.

[60 FR 62936, Dec. 7, 1995, as amended at 76 FR 72072, Nov. 21, 2011]

§ 63.803 Work practice standards.

(a) *Work practice implementation plan.* (1) Each owner or operator of an affected source subject to this subpart shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture operation manufacturing operation and addresses each of the work practice standards presented in paragraphs (b) through (l) of this section. The plan shall be developed no more than 60 days after the compliance date.

(2) The written work practice implementation plan shall be available for inspection by the Administrator (or delegated State, local, or Tribal authority) upon request. If the Administrator (or delegated State, local, or Tribal authority) determines that the work practice implementation plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the Administrator (or delegated State, local, or Tribal authority) may require the affected source to modify the plan. Revisions or modifications to the plan do not require a revision of the source's Title V permit.

(3) The inspection and maintenance plan required by paragraph (c) of this section and the formulation assessment plan for finishing operations required by paragraph (l) of this section are also reviewable by the Administrator (or delegated State, local, or Tribal authority).

(b) *Operator training course.* Each owner or operator of an affected source shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and washoff operations, use of manufacturing equipment, or implementation of the requirements of this subpart. All new personnel, those hired after the compliance date of the standard, shall be trained upon hiring. All existing personnel, those hired before the compliance date of the standard, shall be trained within six months of the compliance date of the standard. All personnel shall be given refresher training annually. The affected source shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:

(1) A list of all current personnel by name and job description that are required to be trained;

(2) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;

(3) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and

(4) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.

(c) *Inspection and maintenance plan.* Each owner or operator of an affected source shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:

(1) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic HAP solvents;

(2) An inspection schedule;

(3) Methods for documenting the date and results of each inspection and any repairs that were made;

(4) The timeframe between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:

(i) A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and

(ii) Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

(d) *Cleaning and washoff solvent accounting system.* Each owner or operator of an affected source shall develop an organic HAP solvent accounting form to record:

(1) The quantity and type of organic HAP solvent used each month for washoff and cleaning, as defined in § 63.801 of this subpart;

(2) The number of pieces washed off, and the reason for the washoff; and

(3) The quantity of spent organic HAP solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.

(e) *Chemical composition of cleaning and washoff solvents.* Each owner or operator of an affected source shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 to this subpart, in concentrations subject to MSDS reporting as required by OSHA.

(f) *Spray booth cleaning.* Each owner or operator of an affected source shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, or plastic filters unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic HAP solvent per booth to prepare the surface of the booth prior to applying the booth coating.

(g) *Storage requirements.* Each owner or operator of an affected source shall use normally closed containers for storing finishing, gluing, cleaning, and washoff materials.

(h) *Application equipment requirements.* Each owner or operator of an affected source shall not use conventional air spray guns except when all emissions from the finishing application station are routed to a functioning control device.

(i) *Line cleaning.* Each owner or operator of an affected source shall pump or drain all organic HAP solvent used for line cleaning into a normally closed container.

(j) *Gun cleaning.* Each owner or operator of an affected source shall collect all organic HAP solvent used to clean spray guns into a normally closed container.

(k) *Washoff operations.* Each owner or operator of an affected source shall control emissions from washoff operations by:

(1) Using normally closed tanks for washoff; and

(2) Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.

(l) *Formulation assessment plan for finishing operations.* Each owner or operator of an affected source shall prepare and maintain with the work practice implementation plan a formulation assessment plan that:

(1) Identifies VHAP from the list presented in Table 5 of this subpart that are being used in finishing operations by the affected source;

(2) Establishes a baseline level of usage by the affected source, for each VHAP identified in paragraph (l)(1) of this section. The baseline usage level shall be the highest annual usage from 1994, 1995, or 1996, for each VHAP identified in paragraph (l)(1) of this section. For formaldehyde, the baseline level of usage shall be based on the amount of free formaldehyde present in the finishing material when it is applied. For styrene, the baseline level of usage shall be an estimate of unreacted styrene, which shall be calculated by multiplying the amount of styrene monomer in the finishing material, when it is applied, by a factor of 0.16. Sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the equation in § 63.805 (d) or (e).

(3) Tracks the annual usage of each VHAP identified in (l)(1) by the affected source that is present in amounts subject to MSDS reporting as required by OSHA.

(4) If, after November 1998, the annual usage of the VHAP identified in paragraph (l)(1) exceeds its baseline level, then the owner or operator of the affected source shall provide a written notification to the permitting authority that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the owner or operator from further action, unless the affected source is not in compliance with any State regulations or requirements for that VHAP:

(i) The exceedance is no more than 15.0 percent above the baseline level;

(ii) Usage of the VHAP is below the de minimis level presented in Table 5 of this subpart for that VHAP (sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the procedures in § 63.805 (d) or (e));

(iii) The affected source is in compliance with its State's air toxic regulations or guidelines for the VHAP; or

(iv) The source of the pollutant is a finishing material with a VOC content of no more than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied.

(5) If none of the above explanations are the reason for the increase, the owner or operator shall confer with the permitting authority to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality, and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the permitting authority and owner or operator. If there are no practical and reasonable solutions, the facility need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan, and a schedule for submitting notification of progress.

(6) If, after November 1998, an affected source uses a VHAP of potential concern listed in table 6 of this subpart for which a baseline level has not been previously established, then the baseline level shall be established as the *de minimis* level provided in that same table for that chemical. The affected source shall track the annual usage of each VHAP of potential concern identified in this paragraph that is present in amounts subject to MSDS reporting as required by OSHA. If usage of the VHAP of potential concern exceeds the *de minimis* level listed in table 6 of this subpart for that chemical, then the affected source shall provide an explanation to the permitting authority that documents the reason for the exceedance of the *de minimis* level. If the explanation is not one of those listed in paragraphs (l)(4)(i) through (l)(4)(iv) of this section, the affected source shall follow the procedures in paragraph (l)(5) of this section.

[60 FR 62936, Dec. 7, 1995, as amended at 63 FR 71380, Dec. 28, 1998; 68 FR 37353, June 23, 2003; 76 FR 72073, Nov. 21, 2011]

§ 63.804 Compliance procedures and monitoring requirements.

(a) The owner or operator of an existing affected source subject to § 63.802(a)(1) shall comply with those provisions using any of the methods presented in § 63.804 (a)(1) through (a)(4).

(1) Calculate the average VHAP content for all finishing materials used at the facility using Equation 1, and maintain a value of E no greater than 1.0;

$$E = (M_{c1} C_{c1} + M_{c2} C_{c2} + \dots + M_{cn} C_{cn} + S_1 W_1 + S_2 W_2 + \dots + S_n W_n) / (M_{c1} + M_{c2} + \dots + M_{cn}) \quad \text{Equation 1}$$

(2) Use compliant finishing materials according to the following criteria:

(i) Demonstrate that each stain, sealer, and topcoat has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight by maintaining certified product data sheets for each coating and thinner;

(ii) Demonstrate that each washcoat, basecoat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight by maintaining certified product data sheets for each coating and thinner; and

(iii) Demonstrate that each washcoat, basecoat, and enamel that is formulated at the affected source is formulated using a finishing material containing no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids) and a thinner containing no more than 3.0 percent VHAP by weight.

(3) Use a control system with an overall control efficiency (R) such that the value of E_{ac} in Equation 2 is no greater than 1.0.

$$R = [(E_{bc} - E_{ac}) / E_{bc}] (100) \quad \text{Equation 2}$$

The value of E_{bc} in Equation 2 shall be calculated using Equation 1; or

(4) Use any combination of an averaging approach, as described in paragraph (a)(1) of this section, compliant finishing materials, as described in paragraph (a)(2) of this section, and a control system, as described in paragraph (a)(3) of this section.

(b) The owner or operator of an affected source subject to § 63.802(a)(2)(i) shall comply with the provisions by using compliant foam adhesives with a VHAP content no greater than 1.8 kg VHAP/kg solids (1.8 lb VHAP/lb solids), as applied.

(c) The owner or operator of an affected source subject to § 63.802(a)(2)(ii) shall comply with those provisions by using either of the methods presented in § 63.804 (c)(1) and (c)(2).

(1) Use compliant contact adhesives with a VHAP content no greater than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied; or

(2) Use a control system with an overall control efficiency (R) such that the value of G_{ac} is no greater than 1.0.

$$R = [(G_{bc} - G_{ac}) / G_{bc}] (100) \quad \text{Equation 3}$$

(d) The owner or operator of a new affected source subject to § 63.802(b)(1) may comply with those provisions by using any of the following methods:

(1) Calculate the average VHAP content across all finishing materials used at the facility using Equation 1, and maintain a value of E no greater than 0.8;

(2) Use compliant finishing materials according to the following criteria:

(i) Demonstrate that each sealer and topcoat has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, each stain has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight;

(ii) Demonstrate that each washcoat, basecoat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight; and

(iii) Demonstrate that each washcoat, basecoat, and enamel that is formulated onsite is formulated using a finishing material containing no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids) and a thinner containing no more than 3.0 percent HAP by weight.

(3) Use a control system with an overall control efficiency (R) such that the value of E_{ac} in Equation 4 is no greater than 0.8.

$$R = [(E_{bc} - E_{ac}) / E_{bc}] (100) \quad \text{Equation 4}$$

The value of E_{bc} in Equation 4 shall be calculated using Equation 1; or

(4) Use any combination of an averaging approach, as described in (d)(1), compliant finishing materials, as described in (d)(2), and a control system, as described in (d)(3).

(e) The owner or operator of a new affected source subject to § 63.802(b)(2) shall comply with the provisions using either of the following methods:

(1) Use compliant contact adhesives with a VHAP content no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied; or

(2) Use a control system with an overall control efficiency (R) such that the value of G_{ac} in Equation 3 is no greater than 0.2.

(f) *Initial compliance.* (1) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that comply through the procedures established in § 63.804 (a)(1) or (d)(1) shall submit the results of the averaging calculation (Equation 1) for the first month with the initial compliance status report required by § 63.807(b). The first month's calculation shall include data for the entire month in which the compliance date falls. For example, if the source's compliance date is November 21, 1997, the averaging calculation shall include data from November 1, 1997 to November 30, 1997.

(2) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that comply through the procedures established in § 63.804 (a)(2) or (d)(2) shall submit an initial compliance status report, as

required by § 63.807(b), stating that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as applicable, are being used by the affected source.

(3) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that are complying through the procedures established in § 63.804 (a)(2) or (d)(2) and are applying coatings using continuous coaters shall demonstrate initial compliance by:

(i) Submitting an initial compliance status report, as required by § 63.807(b), stating that compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, and compliant thinners are being used; or

(ii) Submitting an initial compliance status report, as required by § 63.807(b), stating that compliant coatings, as determined by the VHAP content of the coating in the reservoir, are being used; the viscosity of the coating in the reservoir is being monitored; and compliant thinners are being used. The affected source shall also submit data that demonstrate that viscosity is an appropriate parameter for demonstrating compliance.

(4) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that comply through the procedures established in § 63.804 (a)(3) or (d)(3) shall demonstrate initial compliance by:

(i) Submitting a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance;

(ii) Conducting an initial performance test as required under § 63.7 using the procedures and test methods listed in § 63.7 and § 63.805 (c) and (d) or (e);

(iii) Calculating the overall control efficiency (R) following the procedures in § 63.805 (d) or (e); and

(iv) Determining those operating conditions critical to determining compliance and establishing one or more operating parameters that will ensure compliance with the standard.

(A) For compliance with a thermal incinerator, minimum combustion temperature shall be the operating parameter.

(B) For compliance with a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst bed shall be the operating parameter.

(C) For compliance with a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

(D) For compliance with a carbon adsorber, the operating parameters shall be the total regeneration mass stream flow for each regeneration cycle and the carbon bed temperature after each regeneration, or the concentration level of organic compounds exiting the adsorber, unless the owner or operator requests and receives approval from the Administrator to establish other operating parameters.

(E) For compliance with a control device not listed in this section, one or more operating parameter values shall be established using the procedures identified in § 63.804(g)(4)(vi).

(v) Owners or operators complying with § 63.804(f)(4) shall calculate each site-specific operating parameter value as the arithmetic average of the maximum or minimum operating parameter values, as appropriate, that demonstrate compliance with the standards, during the three test runs required by § 63.805(c)(1).

(5) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(2) or (b)(2) that comply through the procedures established in § 63.804 (b), (c)(1), or (e)(1), shall submit an initial compliance status report, as required by § 63.807(b), stating that compliant contact adhesives are being used by the affected source.

(6) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(2)(ii) or (b)(2) that comply through the procedures established in § 63.804 (c)(2) or (e)(2), shall demonstrate initial compliance by:

- (i) Submitting a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance;
 - (ii) Conducting an initial performance test as required under § 63.7 using the procedures and test methods listed in § 63.7 and § 63.805 (c) and (d) or (e);
 - (iii) Calculating the overall control efficiency (R) following the procedures in § 63.805 (d) or (e); and
 - (iv) Determining those operating conditions critical to determining compliance and establishing one or more operating parameters that will ensure compliance with the standard.
- (A) For compliance with a thermal incinerator, minimum combustion temperature shall be the operating parameter.
- (B) For compliance with a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst shall be the operating parameter.
- (C) For compliance with a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.
- (v) Owners or operators complying with § 63.804(f)(6) shall calculate each site-specific operating parameter value as the arithmetic average of the maximum or minimum operating values as appropriate, that demonstrate compliance with the standards, during the three test runs required by § 63.805(c)(1).
- (7) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(3) or (b)(3) shall submit an initial compliance status report, as required by § 63.807(b), stating that compliant strippable spray booth coatings are being used by the affected source.
- (8) Owners or operators of an affected source subject to the work practice standards in § 63.803 shall submit an initial compliance status report, as required by § 63.807(b), stating that the work practice implementation plan has been developed and procedures have been established for implementing the provisions of the plan.
- (g) *Continuous compliance demonstrations.* (1) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that comply through the procedures established in § 63.804 (a)(1) or (d)(1) shall demonstrate continuous compliance by submitting the results of the averaging calculation (Equation 1) for each month within that semiannual period and submitting a compliance certification with the semiannual report required by § 63.807(c).
- (i) The compliance certification shall state that the value of (E), as calculated by Equation 1, is no greater than 1.0 for existing sources or 0.8 for new sources. An affected source is in violation of the standard if E is greater than 1.0 for existing sources or 0.8 for new sources for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.
 - (ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.
- (2) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that comply through the procedures established in § 63.804 (a)(2) or (d)(2) shall demonstrate continuous compliance by using compliant coatings and thinners, maintaining records that demonstrate the coatings and thinners are compliant, and submitting a compliance certification with the semiannual report required by § 63.807(c).
- (i) The compliance certification shall state that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.
 - (ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(3) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that are complying through the procedures established in § 63.804 (a)(2) or (d)(2) and are applying coatings using continuous coaters shall demonstrate continuous compliance by following the procedures in paragraph (g)(3) (i) or (ii) of this section.

(i) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, using compliant thinners, and submitting a compliance certification with the semiannual report required by § 63.807(c).

(A) The compliance certification shall state that compliant coatings have been used each day in the semiannual reporting period, or should otherwise identify the days of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

(B) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(ii) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir, using compliant thinners, maintaining a viscosity of the coating in the reservoir that is no less than the viscosity of the initial coating by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added, maintaining records of solvent additions, and submitting a compliance certification with the semiannual report required by § 63.807(c).

(A) The compliance certification shall state that compliant coatings, as determined by the VHAP content of the coating in the reservoir, have been used each day in the semiannual reporting period. Additionally, the certification shall state that the viscosity of the coating in the reservoir has not been less than the viscosity of the initial coating, that is, the coating that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period.

(B) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(C) An affected source is in violation of the standard when a sample of the as-applied coating exceeds the applicable limit established in § 63.804 (a)(2) or (d)(2), as determined using EPA Method 311, or the viscosity of the coating in the reservoir is less than the viscosity of the initial coating.

(4) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(1) or (b)(1) that comply through the procedures established in § 63.804 (a)(3) or (d)(3) shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to manufacturer's specifications. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by § 63.807(d) and § 63.10(e) of subpart A.

(i) Where a capture/control device is used, a device to monitor each site-specific operating parameter established in accordance with § 63.804(f)(6)(i) is required.

(ii) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to determine the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

(iii) Where a carbon adsorber is used one of the following is required:

(A) An integrating stream flow monitoring device having an accuracy of ± 10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of ± 1 percent of the temperature being monitored or ± 0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the Administrator in accordance with § 63.804(f)(4)(iv)(D).

(iv) Owners or operators of an affected source shall not operate the capture or control device at a daily average value greater than or less than (as appropriate) the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

(v) Owners or operators of an affected source that are complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

(vi) An owner or operator who uses a control device not listed in § 63.804(f)(4) shall submit, for the Administrator's approval, a description of the device, test data verifying performance, and appropriate site-specific operating parameters that will be monitored to demonstrate continuous compliance with the standard.

(5) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(2) (i) or (ii) or (b)(2) that comply through the procedures established in § 63.804 (b), (c)(1), or (e)(1), shall submit a compliance certification with the semiannual report required by § 63.807(c).

(i) The compliance certification shall state that compliant contact and/or foam adhesives have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant contact and/or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(6) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(2)(ii) or (b)(2) that comply through the procedures established in § 63.804 (c)(2) or (e)(2), shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to the manufacturer's specifications. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by § 63.807(d) and § 63.10(e) of subpart A of this part.

(i) Where a capture/control device is used, a device to monitor each site-specific operating parameter established in accordance with § 63.804(f)(6)(i) is required.

(ii) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to measure the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

(iii) Where a carbon adsorber is used one of the following is required:

(A) An integrating stream flow monitoring device having an accuracy of ± 10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of ± 1 percent of the temperature being monitored or ± 0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the Administrator in accordance with § 63.804(f)(4)(iv)(D).

(iv) Owners or operators of an affected source shall not operate the capture or control device at a daily average value greater than or less than (as appropriate) the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

(v) Owners or operators of an affected source that are complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

(vi) An owner or operator using a control device not listed in this section shall submit to the Administrator a description of the device, test data verifying the performance of the device, and appropriate operating parameter values that will be monitored to demonstrate continuous compliance with the standard. Compliance using this device is subject to the Administrator's approval.

(7) Owners or operators of an affected source subject to the provisions of § 63.802 (a)(3) or (b)(3) shall submit a compliance certification with the semiannual report required by § 63.807(c).

(i) The compliance certification shall state that compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the standard.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(8) Owners or operators of an affected source subject to the work practice standards in § 63.803 shall submit a compliance certification with the semiannual report required by § 63.807(c).

(i) The compliance certification shall state that the work practice implementation plan is being followed, or should otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that an owner or operator is required to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a violation.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(9) *Continuous compliance requirements.* You must demonstrate continuous compliance with the emissions standards and operating limits by using the performance test methods and procedures in § 63.805 for each affected source.

(i) *General requirements.* (A) You must monitor and collect data, and provide a site specific monitoring plan as required by §§ 63.804, 63.806 and 63.807.

(B) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), you must operate the monitoring system and collect data at all required intervals at all times the affected source is operating and periods of malfunction. Any period for which data collection is required and the operation of the CEMS is not otherwise exempt and for which the monitoring system is

out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(C) You may not use data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(ii) [Reserved]

(h) The owner or operator of an existing or new affected source subject to § 63.802(a)(4) or (b)(4) shall comply with those provisions by using either of the methods presented in § 63.804(h)(1) and (2) if complying with § 63.802(a)(4)(i) or (b)(4)(i) or by using the method presented in § 63.804(h)(3) if complying with § 63.802(a)(4)(ii) or (b)(4)(ii).

(1) Calculate total formaldehyde emissions from all finishing materials and contact adhesives used at the facility using Equation 5 and maintain a value of F_{total} no more than 400 pounds per rolling 12 month period.

$$F_{total} = (C_{f1} V_{c1} + C_{f2} V_{c2} + * * * + C_{fn} V_{cn} + G_{f1} V_{g1} + G_{f2} V_{g2} + * * * + G_{fn} V_{gn}) \text{ Equation 5}$$

(2) Use a control system with an overall control efficiency (R) such that the calculated value of F_{total} in Equation 6 is no more than 400 pounds per rolling 12 month period.

$$F_{total} = (C_{f1} V_{c1} + C_{f2} V_{c2} + * * * + C_{fn} V_{cn} + G_{f1} V_{g1} + G_{f2} V_{g2} + * * * + G_{fn} V_{gn}) * (1-R) \text{ Equation 6}$$

(3) Demonstrate compliance by use of coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives maintaining a certified product data sheet for each coating and contact adhesive used, as required by § 63.806(b)(1), and submitting a compliance certification with the semiannual report required by § 63.807(c).

(i) The compliance certification shall state that low-formaldehyde coatings and contact adhesives, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a coating or contact adhesive that is not low-formaldehyde, as demonstrated by records or by a sample of the coating or contact adhesive, is used. Use of a noncompliant coating or contact adhesive is a separate violation for each day the noncompliant coating or contact adhesive is used.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

[60 FR 62936, Dec. 7, 1995, as amended at 76 FR 72073, Nov. 21, 2011]

§ 63.805 Performance test methods.

(a)(1) The EPA Method 311 of appendix A of part 63 shall be used in conjunction with formulation data to determine the VHAP content of the liquid coating. Formulation data shall be used to identify VHAP present in the coating. The EPA Method 311 shall then be used to quantify those VHAP identified through formulation data. The EPA Method 311 shall not be used to quantify HAP such as styrene and formaldehyde that are emitted during the cure. The EPA Method 24 (40 CFR part 60, appendix A) shall be used to determine the solids content by weight and the density of coatings. If it is demonstrated to the satisfaction of the Administrator that a coating does not release VOC or HAP byproducts during the cure, for example, all VOC and HAP present in the coating is solvent, then batch formulation information shall be accepted. The owner or operator of an affected source may request approval from the

Administrator to use an alternative method for determining the VHAP content of the coating. In the event of any inconsistency between the EPA Method 24 or Method 311 test data and a facility's formulation data, that is, if the EPA Method 24/311 value is higher, the EPA Method 24/311 test shall govern unless after consultation, a regulated source could demonstrate to the satisfaction of the enforcement agency that the formulation data were correct. Sampling procedures shall follow the guidelines presented in "Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A," EPA-340/1-91-010. (Docket No. A-93-10, Item No. IV-A-1).

(2) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(b) Owners or operators demonstrating compliance in accordance with § 63.804 (f)(4) or (f)(6) and § 63.804 (g)(4) or (g)(6), or complying with any of the other emission limits of § 63.802 by operating a capture or control device shall determine the overall control efficiency of the control system (R) as the product of the capture and control device efficiency, using the test methods cited in § 63.805(c) and the procedures in § 63.805 (d) or (e).

(c) When an initial compliance demonstration is required by § 63.804 (f)(4) or (f)(6) of this subpart, the procedures in paragraphs (c)(1) through (c)(6) of this section shall be used in determining initial compliance with the provisions of this subpart.

(1) The EPA Method 18 (40 CFR part 60, appendix A) shall be used to determine the HAP concentration of gaseous air streams. The test shall consist of three separate runs, each lasting a minimum of 30 minutes.

(2) The EPA Method 1 or 1A (40 CFR part 60, appendix A) shall be used for sample and velocity traverses.

(3) The EPA Method 2, 2A, 2C, or 2D (40 CFR part 60, appendix A) shall be used to measure velocity and volumetric flow rates.

(4) The EPA Method 3 (40 CFR part 60, appendix A) shall be used to analyze the exhaust gases.

(5) The EPA Method 4 (40 CFR part 60, appendix A) shall be used to measure the moisture in the stack gas.

(6) The EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(d) Each owner or operator of an affected source demonstrating compliance in accordance with § 63.804 (f)(4) or (f)(6) shall perform a gaseous emission test using the following procedures:

(1) Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP emissions can be accurately determined by the applicable test methods specified in § 63.805(c) (1) through (6);

(2) Determine capture efficiency from the affected emission point(s) by capturing, venting, and measuring all HAP emissions from the affected emission point(s). During a performance test, the owner or operator shall isolate affected emission point(s) located in an area with other nonaffected gaseous emission sources from all other gaseous emission point(s) by any of the following methods:

(i) Build a temporary total enclosure (see § 63.801) around the affected emission point(s); or

(ii) Use the building that houses the process as the enclosure (see § 63.801);

(iii) Use any alternative protocol and test method provided they meet either the requirements of the data quality objective (DQO) approach or the lower confidence level (LCL) approach (see § 63.801);

(iv) Shut down all nonaffected HAP emission point(s) and continue to exhaust fugitive emissions from the affected emission point(s) through any building ventilation system and other room exhausts such as drying ovens. All exhaust air must be vented through stacks suitable for testing; or

(v) Use another methodology approved by the Administrator provided it complies with the EPA criteria for acceptance under part 63, appendix A, Method 301.

(3) Operate the control device with all affected emission points that will subsequently be delivered to the control device connected and operating at maximum production rate;

(4) Determine the efficiency (F) of the control device using the following equation:

$$F = \frac{\sum_{i=1}^n Q_{di} C_{di} - \sum_{j=1}^p Q_{vj} C_{vj}}{\sum_{i=1}^n Q_{di} C_{di}} \quad (\text{Equation 5})$$

(5) Determine the efficiency (N) of the capture system using the following equation:

$$N = \frac{\sum_{i=1}^n Q_{di} C_{di}}{\sum_{i=1}^n Q_{di} C_{di} + \sum_{k=1}^p Q_{fk} C_{fk}} \quad (\text{Equation 6})$$

(6) For each affected source complying with § 63.802(a)(1) in accordance with § 63.804(a)(3), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of E_{ac} in Equation 2 is no greater than 1.0.

(7) For each new affected source complying with § 63.802(b)(1) in accordance with § 63.804(d)(3), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of E_{ac} in Equation 4 is no greater than 0.8.

(8) For each affected source complying with § 63.802(a)(2)(ii) in accordance with § 63.804(c)(2), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of G_{ac} in Equation 3 is no greater than 1.0.

(9) For each new affected source complying with § 63.802(b)(2) in accordance with § 63.804(e)(2), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of G_{ac} in Equation 3 is no greater than 0.2.

(e) An alternative method to the compliance method in § 63.805(d) is the installation of a permanent total enclosure around the affected emission point(s). A permanent total enclosure presents prima facie evidence that all HAP emissions from the affected emission point(s) are directed to the control device. Each affected source that complies using a permanent total enclosure shall:

(1) Demonstrate that the total enclosure meets the requirements in paragraphs (e)(1) (i) through (iv). The owner or operator of an enclosure that does not meet these requirements may apply to the Administrator for approval of the enclosure as a total enclosure on a case-by-case basis. The enclosure shall be considered a total enclosure if it is demonstrated to the satisfaction of the Administrator that all HAP emissions from the affected emission point(s) are contained and vented to the control device. The requirements for automatic approval are as follows:

(i) The total area of all natural draft openings shall not exceed 5 percent of the total surface area of the total enclosure's walls, floor, and ceiling;

(ii) All sources of emissions within the enclosure shall be a minimum of four equivalent diameters away from each natural draft opening;

(iii) The average inward face velocity (FV) across all natural draft openings shall be a minimum of 3,600 meters per hour as determined by the following procedures:

(A) All forced makeup air ducts and all exhaust ducts are constructed so that the volumetric flow rate in each can be accurately determined by the test methods specified in § 63.805 (c)(2) and (3). Volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(B) Determine FV by the following equation:

$$FV = \frac{\sum_{j=1}^n Q_{out j} - \sum_{i=1}^p Q_{in i}}{\sum_{k=1}^q A_k} \quad (\text{Equation 7})$$

(iv) All access doors and windows whose areas are not included as natural draft openings and are not included in the calculation of FV shall be closed during routine operation of the process.

(2) Determine the control device efficiency using Equation (5), and the test methods and procedures specified in § 63.805 (c)(1) through (6).

(3) For each affected source complying with § 63.802(a)(1) in accordance with § 63.804(a)(3), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N=1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of E_{ac} in Equation 2 is no greater than 1.0.

(4) For each new affected source complying with § 63.802(b)(1) in accordance with § 63.804(d)(3), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N = 1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of E_{ac} in Equation 4 is no greater than 0.8.

(5) For each affected source complying with § 63.802(a)(2)(ii) in accordance with § 63.804(c)(2), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N=1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of G_{ac} in Equation 3 is no greater than 1.0.

(6) For each new affected source complying with § 63.802(b)(2) in accordance with § 63.804(e)(2), compliance is demonstrated if:

- (i) The installation of a permanent total enclosure is demonstrated ($N=1$);
- (ii) The value of F is determined from Equation (5); and
- (iii) The product of $(F \times N)(100)$ yields a value (R) such that the value of G_{ac} in Equation 3 is no greater than 0.2.

[60 FR 62936, Dec. 7, 1995, as amended at 76 FR 72073, Nov. 21, 2011]

§ 63.806 Recordkeeping requirements.

(a) The owner or operator of an affected source subject to this subpart shall fulfill all recordkeeping requirements of § 63.10 of subpart A, according to the applicability criteria in § 63.800(d) of this subpart.

(b) The owner or operator of an affected source subject to the emission limits in § 63.802 of this subpart shall maintain records of the following:

- (1) A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in § 63.802; and
- (2) The VHAP content, in kg VHAP/kg solids (lb VHAP/lb solids), as applied, of each finishing material and contact adhesive subject to the emission limits in § 63.802; and
- (3) The VOC content, in kg VOC/kg solids (lb VOC/lb solids), as applied, of each strippable booth coating subject to the emission limits in § 63.802 (a)(3) or (b)(3).
- (4) The formaldehyde content, in lb/gal, as applied, of each finishing material and contact adhesive subject to the emission limits in § 63.802(a)(4) or (b)(4) and chooses to comply with the 400 lb/yr limits on formaldehyde in § 63.802(a)(4) (i) or (b)(4)(i).

(c) The owner or operator of an affected source following the compliance method in § 63.804 (a)(1) or (d)(1) shall maintain copies of the averaging calculation for each month following the compliance date, as well as the data on the quantity of coatings and thinners used that is necessary to support the calculation of E in Equation 1.

(d) The owner or operator of an affected source following the compliance procedures of § 63.804 (f)(3)(ii) and (g)(3)(ii) shall maintain the records required by § 63.806(b) as well as records of the following:

- (1) Solvent and coating additions to the continuous coater reservoir;
- (2) Viscosity measurements; and
- (3) Data demonstrating that viscosity is an appropriate parameter for demonstrating compliance.

(e) The owner or operator of an affected source subject to the work practice standards in § 63.803 of this subpart shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:

- (1) Records demonstrating that the operator training program required by § 63.803(b) is in place;
- (2) Records collected in accordance with the inspection and maintenance plan required by § 63.803(c);
- (3) Records associated with the cleaning solvent accounting system required by § 63.803(d);
- (4) [Reserved]
- (5) Records associated with the formulation assessment plan required by § 63.803(l); and

(6) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.

(f) The owner or operator of an affected source following the compliance method of § 63.804 (f)(4) or (g)(4) shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the value of E_{ac} required by Equations 2 or 4, records of the operating parameter values, and copies of the semiannual compliance reports required by § 63.807(d).

(g) The owner or operator of an affected source following the compliance method of § 63.804 (f)(6) or (g)(6), shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the applicable value of G_{ac} calculated using Equation 3, records of the operating parameter values, and copies of the semiannual compliance reports required by § 63.807(d).

(h) The owner or operator of an affected source subject to the emission limits in § 63.802 and following the compliance provisions of § 63.804(f) (1), (2), (3), (5), (7) and (8) and § 63.804(g) (1), (2), (3), (5), (7), and (8) shall maintain records of the compliance certifications submitted in accordance with § 63.807(c) for each semiannual period following the compliance date.

(i) The owner or operator of an affected source shall maintain records of all other information submitted with the compliance status report required by § 63.9(h) and § 63.807(b) and the semiannual reports required by § 63.807(c).

(j) The owner or operator of an affected source shall maintain all records in accordance with the requirements of § 63.10(b)(1).

(k) The owner or operator of an affected source subject to this subpart shall maintain records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control equipment and monitoring equipment. The owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.802(c), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[60 FR 62936, Dec. 7, 1995, as amended at 76 FR 72074, Nov. 21, 2011]

§ 63.807 Reporting requirements.

(a) The owner or operator of an affected source subject to this subpart shall fulfill all reporting requirements of § 63.7 through § 63.10 of subpart A (General Provisions) according to the applicability criteria in § 63.800(d) of this subpart.

(b) The owner or operator of an affected source demonstrating compliance in accordance with § 63.804(f) (1), (2), (3), (5), (7) and (8) shall submit the compliance status report required by § 63.9(h) of subpart A (General Provisions) no later than 60 days after the compliance date. The report shall include the information required by § 63.804(f) (1), (2), (3), (5), (7), and (8) of this subpart.

(c) The owner or operator of an affected source demonstrating compliance in accordance with § 63.804(g)(1), (2), (3), (5), (7), (8), (h)(1), and (h)(3) shall submit a report covering the previous 6 months of wood furniture manufacturing operations.

(1) The first report shall be submitted 30 calendar days after the end of the first 6-month period following the compliance date.

(2) Subsequent reports shall be submitted 30 calendar days after the end of each 6-month period following the first report.

(3) The semiannual reports shall include the information required by § 63.804(g) (1), (2), (3), (5), (7), (8), (h)(1), and (h)(3), a statement of whether the affected source was in compliance or noncompliance, and, if the affected source was in noncompliance, the measures taken to bring the affected source into compliance. If there was a malfunction during the reporting period, the report shall also 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 § 63.802(c), including actions taken to correct a malfunction.

(4) The frequency of the reports required by paragraph (c) of this section shall not be reduced from semiannually regardless of the history of the owner's or operator's compliance status.

(d) The owner or operator of an affected source demonstrating compliance in accordance with § 63.804(g)(4), (6), and (h)(2) of this subpart shall submit the excess emissions and continuous monitoring system performance report and summary report required by § 63.10(e) of subpart A. The report shall include the monitored operating parameter values required by § 63.804(g) (4) and (6). If the source experiences excess emissions, the report shall be submitted quarterly for at least 1 year after the excess emissions occur and until a request to reduce reporting frequency is approved, as indicated in § 63.10(e)(3)(C). If no excess emissions occur, the report shall be submitted semiannually.

(e) The owner or operator of an affected source required to provide a written notification under § 63.803(1)(4) shall include in the notification one or more statements that explains the reasons for the usage increase. The notification shall be submitted no later than 30 calendar days after the end of the annual period in which the usage increase occurred.

[60 FR 62936, Dec. 7, 1995, as amended at 76 FR 72074, Nov. 21, 2011]

§ 63.808 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (5) of this section.

(1) Approval of alternatives to the requirements in §§ 63.800, 63.802, and 63.803(a)(1), (b), (c) introductory text, and (d) through (l).

(2) Approval of alternatives to the monitoring and compliance requirements in §§ 63.804(f)(4)(iv)(D) and (E), 63.804(g)(4)(iii)(C), 63.804(g)(4)(vi), and 63.804(g)(6)(vi).

(3) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart, as well as approval of any alternatives to the specific test methods under §§ 63.805(a), 63.805(d)(2)(v), and 63.805(e)(1).

(4) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(5) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

[68 FR 37354, June 23, 2003]

§§ 63.809-63.819 [Reserved]

Table 1 to Subpart JJ of Part 63—General Provisions Applicability to Subpart JJ

Reference	Applies to subpart JJ	Comment
63.1(a)	Yes	
63.1(b)(1)	No	Subpart JJ specifies applicability.
63.1(b)(2)	Yes	
63.1(b)(3)	Yes	
63.1(c)(1)	No	Subpart JJ specifies applicability.
63.1(c)(2)	No	Area sources are not subject to subpart JJ.
63.1(c)(4)	Yes	
63.1(c)(5)	Yes	
63.1(e)	Yes	
63.2	Yes	Additional terms are defined in 63.801(a) of subpart JJ. When overlap between subparts A and JJ occurs, subpart JJ takes precedence.
63.3	Yes	Other units used in subpart JJ are defined in 63.801(b).
63.4	Yes	
63.5	Yes	
63.6(a)	Yes	
63.6(b)(1)	Yes	
63.6(b)(2)	Yes	
63.6(b)(3)	Yes	
63.6(b)(4)	No	May apply when standards are proposed under Section 112(f) of the CAA.
63.6(b)(5)	Yes	
63.6(b)(7)	Yes	
63.6(c)(1)	Yes	
63.6(c)(2)	No	
63.6(c)(5)	Yes	
63.6(e)(1)(i)	No	See § 63.802(c) for general duty requirement.
63.6(e)(1)(ii)	No.	
63.6(e)(1)(iii)	Yes.	
63.6(e)(2)	No	Section reserved.
63.6(e)(3)	No.	
63.6(f)(1)	No	Affected sources complying through the procedures specified in 63.804 (a)(1), (a)(2), (b), (c)(1), (d)(1), (d)(2), (e)(1), and (e)(2) are subject to the emission standards at all times, including periods of startup, shutdown, and malfunction.
63.6(f)(2)	Yes	
63.6(f)(3)	Yes	
63.6(g)	Yes	
63.6(h)	No	
63.6 (i)(1)-(i)(3)	Yes	
63.6(i)(4)(i)	Yes	
63.6(i)(4)(ii)	No	
63.6 (i)(5)-(i)(14)	Yes	
63.6(i)(16)	Yes	

Reference	Applies to subpart JJ	Comment
63.6(j)	Yes	
63.7(a)-(d)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.7(e)(1)	No	See § 63.805(a)(1).
63.7(e)(2)-(e)(4)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.8(a)-(b)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.8(c)(1)(i)	No.	
63.8(c)(1)(ii)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.8(c)(1)(iii)	No.	
63.8(c)(2)-(d)(2)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.8(d)(3)	Yes, except for last sentence	Applies only to affected sources using a control device to comply with the rule.
63.8(e)-(g)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.9(a)	Yes	
63.9(b)	Yes	Existing sources are required to submit initial notification report within 270 days of the effective date.
63.9(c)	Yes	
63.9(d)	Yes	
63.9(e)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.9(f)	No	
63.9(g)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.9(h)	Yes	63.9(h)(2)(ii) applies only to affected sources using a control device to comply with the rule.
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)(i)	No.	
63.10(b)(2)(ii)	No	See § 63.806(k) for recordkeeping of occurrence and duration of malfunctions and recordkeeping of actions taken during malfunctions.
63.10(b)(2)(iii)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.10(b)(2)(iv)-(b)(2)(v)	No.	
63.10(b)(2)(vi)-(b)(2)(xiv)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.10(b)(3)	Yes	
63.10(c)(1)-(9)	Yes.	
63.10(c)(10)-(11)	No	See § 63.806(k) for recordkeeping of malfunctions.
63.10(c)(12)-(14)	Yes.	
63.10(c)(15)	No.	
63.10(d)(1)	Yes	
63.10(d)(2)	Yes	Applies only to affected sources using a control device to comply with the rule.
63.10(d)(3)	No	
63.10(d)(4)	Yes	
63.10(d)(5)	No	See § 63.807(c)(3) for reporting of malfunctions.
63.10(e)	Yes	Applies only to affected sources using a control device to comply with the rule.

Reference	Applies to subpart JJ	Comment
63.10(f)	Yes	
63.11	No	
63.12-63.15	Yes	

[60 FR 62936, Dec. 7, 1995, as amended at 76 FR 72074, Nov. 21, 2011]

Table 2 to Subpart JJ of Part 63—List of Volatile Hazardous Air Pollutants

Chemical name	CAS No.
Acetaldehyde	75070
Acetamide	60355
Acetonitrile	75058
Acetophenone	98862
2-Acetylaminofluorine	53963
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Allyl chloride	107051
4-Aminobiphenyl	92671
Aniline	62533
o-Anisidine	90040
Benzene	71432
Benzidine	92875
Benzotrichloride	98077
Benzyl chloride	100447
Biphenyl	92524
Bis (2-ethylhexyl) phthalate (DEHP)	117817
Bis (chloromethyl) ether	542881
Bromoform	75252
1,3-Butadiene	106990
Carbon disulfide	75150
Carbon tetrachloride	56235
Carbonyl sulfide	463581
Catechol	120809
Chloroacetic acid	79118
2-Chloroacetophenone	532274
Chlorobenzene	108907
Chloroform	67663
Chloromethyl methyl ether	107302
Chloroprene	126998
Cresols (isomers and mixture)	1319773
o-Cresol	95487
m-Cresol	108394

Chemical name	CAS No.
p-Cresol	106445
Cumene	98828
2,4-D (2,4-Dichlorophenoxyacetic acid, including salts and esters)	94757
DDE (1,1-Dichloro-2,2-bis(p-chlorophenyl)ethylene)	72559
Diazomethane	334883
Dibenzofuran	132649
1,2-Dibromo-3-chloropropane	96128
Dibutylphthalate	84742
1,4-Dichlorobenzene	106467
3,3'-Dichlorobenzidine	91941
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111444
1,3-Dichloropropene	542756
Diethanolamine	111422
N,N-Dimethylaniline	121697
Diethyl sulfate	64675
3,3'-Dimethoxybenzidine	119904
4-Dimethylaminoazobenzene	60117
3,3'-Dimethylbenzidine	119937
Dimethylcarbamoyl chloride	79447
N,N-Dimethylformamide	68122
1,1-Dimethylhydrazine	57147
Dimethyl phthalate	131113
Dimethyl sulfate	77781
4,6-Dinitro-o-cresol, and salts	534521
2,4-Dinitrophenol	51285
2,4-Dinitrotoluene	121142
1,4-Dioxane (1,4-Diethyleneoxide)	123911
1,2-Diphenylhydrazine	122667
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106898
1,2-Epoxybutane	106887
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl carbamate (Urethane)	51796
Ethyl chloride (Chloroethane)	75003
Ethylene dibromide (Dibromoethane)	106934
Ethylene dichloride (1,2-Dichloroethane)	107062
Ethylene glycol	107211
Ethylene oxide	75218
Ethylenethiourea	96457
Ethylidene dichloride (1,1-Dichloroethane)	75343
Formaldehyde	50000
Glycoethers ^a	
Hexachlorobenzene	118741
Hexachloro-1,3-butadiene	87683

Chemical name	CAS No.
Hexachloroethane	67721
Hexamethylene-1,6-diisocyanate	822060
Hexamethylphosphoramide	680319
Hexane	110543
Hydrazine	302012
Hydroquinone	123319
Isophorone	78591
Maleic anhydride	108316
Methanol	67561
Methyl bromide (Bromomethane)	74839
Methyl chloride (Chloromethane)	74873
Methyl chloroform (1,1,1-Trichloroethane)	71556
Methyl ethyl ketone (2-Butanone)	78933
Methylhydrazine	60344
Methyl iodide (Iodomethane)	74884
Methyl isobutyl ketone (Hexone)	108101
Methyl isocyanate	624839
Methyl methacrylate	80626
Methyl tert-butyl ether	1634044
4,4'-Methylenebis (2-chloroaniline)	101144
Methylene chloride (Dichloromethane)	75092
4,4'-Methylenediphenyl diisocyanate (MDI)	101688
4,4'-Methylenedianiline	101779
Naphthalene	91203
Nitrobenzene	98953
4-Nitrobiphenyl	92933
4-Nitrophenol	100027
2-Nitropropane	79469
N-Nitroso-N-methylurea	684935
N-Nitrosodimethylamine	62759
N-Nitrosomorpholine	59892
Phenol	108952
p-Phenylenediamine	106503
Phosgene	75445
Phthalic anhydride	85449
Polychlorinated biphenyls (Aroclors)	1336363
Polycyclic Organic Matter ^b	
1,3-Propane sultone	1120714
beta-Propiolactone	57578
Propionaldehyde	123386
Propoxur (Baygon)	114261
Propylene dichloride (1,2-Dichloropropane)	78875
Propylene oxide	75569
1,2-Propylenimine (2-Methyl aziridine)	75558

Chemical name	CAS No.
Quinone	106514
Styrene	100425
Styrene oxide	96093
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016
1,1,2,2-Tetrachloroethane	79345
Tetrachloroethylene (Perchloroethylene)	127184
Toluene	108883
2,4-Toluediamine	95807
Toluene-2,4-diisocyanate	584849
o-Toluidine	95534
1,2,4-Trichlorobenzene	120821
1,1,2-Trichloroethane	79005
Trichloroethylene	79016
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
Triethylamine	121448
Trifluralin	1582098
2,2,4-Trimethylpentane	540841
Vinyl acetate	108054
Vinyl bromide	593602
Vinyl chloride	75014
Vinylidene chloride (1,1-Dichloroethylene)	75354
Xylenes (isomers and mixture)	1330207
o-Xylene	95476
m-Xylene	108383
p-Xylene	106423

^a Includes mono- and di-ethers of ethylene glycol, diethylene glycols and triethylene glycol; R-(OCH₂CH₂)_n-OR where:

n = 1, 2, or 3,

R = alkyl or aryl groups

R' = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH₂CH₂)_n-OH. Polymers are excluded from the glycol category.

^b Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.

[63 FR 71381, Dec. 28, 1998]

Table 3 to Subpart JJ of Part 63—Summary of Emission Limits

Emission point	Existing source	New source
Finishing Operations:		
(a) Achieve a weighted average VHAP content across all coatings (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied)	^a 1.0	^a 0.8
(b) Use compliant finishing materials (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied):		
—stains	^a 1.0	^a 1.0
—washcoats	^{a,b} 1.0	^{a,b} 0.8
—sealers	^a 1.0	^a 0.8
—topcoats	^a 1.0	^a 0.8
—basecoats	^{a,b} 1.0	^{a,b} 0.8
—enamels	^{a,b} 1.0	^{a,b} 0.8
—thinners (maximum percent VHAP allowable); or	10.0	10.0
(c) As an alternative, use control device; or	^c 1.0	^c 0.8
(d) Use any combination of (a), (b), and (c)	1.0	0.8
Cleaning Operations:		
Strippable spray booth material (maximum VOC content, kg VOC/kg solids [lb VOC/lb solids])	0.8	0.8
Contact Adhesives:		
(a) Use compliant contact adhesives (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied) based on following criteria:		
i. For aerosol adhesives, and for contact adhesives applied to nonporous substrates	^d NA	^d NA
ii. For foam adhesives used in products that meet flammability requirements	1.8	0.2
iii. For all other contact adhesives (including foam adhesives used in products that do not meet flammability requirements); or	1.0	0.2
(b) Use a control device	^e 1.0	^e 0.2
All Finishing Operations and Contact Adhesives:		
(a) Achieve total free formaldehyde emissions across all finishing operations and contact adhesives, lb per rolling 12 month period, as applied	400	400
(b) Use coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives	^f 1.0	^f 1.0

^a The limits refer to the VHAP content of the coating, as applied.

^b Washcoats, basecoats, and enamels must comply with the limits presented in this table if they are purchased premade, that is, if they are not formulated onsite by thinning other finishing materials. If they are formulated onsite, they must be formulated using compliant finishing materials, i.e., those that meet the limits specified in this table, and thinners containing no more than 3.0 percent VHAP by weight.

^c The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.8 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.

^d There is no limit on the VHAP content of these adhesives.

^e The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.2 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.

^f The limits refer to the formaldehyde content by weight of the coating or contact adhesive, as specified on certified product data sheets.

[60 FR 62936, Dec. 7, 1995, as amended at 62 FR 30260, June 3, 1997; 76 FR 72073, Nov. 21, 2011]

Table 4 to Subpart JJ of Part 63—Pollutants Excluded From Use in Cleaning and Washoff Solvents

Chemical name	CAS No.
4-Aminobiphenyl	92671
Styrene oxide	96093
Diethyl sulfate	64675
N-Nitrosomorpholine	59892
Dimethyl formamide	68122
Hexamethylphosphoramide	680319
Acetamide	60355
4,4'-Methylenedianiline	101779
o-Anisidine	90040
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016
Beryllium salts	
Benzidine	92875
N-Nitroso-N-methylurea	684935
Bis (chloromethyl) ether	542881
Dimethyl carbamoyl chloride	79447
Chromium compounds (hexavalent)	
1,2-Propylenimine (2-Methyl aziridine)	75558
Arsenic and inorganic arsenic compounds	99999904
Hydrazine	302012
1,1-Dimethyl hydrazine	57147
Beryllium compounds	7440417
1,2-Dibromo-3-chloropropane	96128
N-Nitrosodimethylamine	62759
Cadmium compounds	
Benzo (a) pyrene	50328
Polychlorinated biphenyls (Aroclors)	1336363
Heptachlor	76448
3,3'-Dimethyl benzidine	119937
Nickel subsulfide	12035722
Acrylamide	79061
Hexachlorobenzene	118741
Chlordane	57749
1,3-Propane sultone	1120714
1,3-Butadiene	106990
Nickel refinery dust	
2-Acetylaminoflourine	53963
3,3'-Dichlorobenzidine	53963
Lindane (hexachlorocyclohexane, gamma)	58899
2,4-Toluene diamine	95807

Chemical name	CAS No.
Dichloroethyl ether (Bis(2-chloroethyl) ether)	111444
1,2-Diphenylhydrazine	122667
Toxaphene (chlorinated camphene)	8001352
2,4-Dinitrotoluene	121142
3,3'-Dimethoxybenzidine	119904
Formaldehyde	50000
4,4'-Methylene bis (2-chloroaniline)	101144
Acrylonitrile	107131
Ethylene dibromide (1,2-Dibromoethane)	106934
DDE (1,1-p-chlorophenyl 1-2 dichloroethylene)	72559
Chlorobenzilate	510156
Dichlorvos	62737
Vinyl chloride	75014
Coke Oven Emissions	
Ethylene oxide	75218
Ethylene thiourea	96457
Vinyl bromide (bromoethene)	593602
Selenium sulfide (mono and di)	7488564
Chloroform	67663
Pentachlorophenol	87865
Ethyl carbamate (Urethane)	51796
Ethylene dichloride (1,2-Dichloroethane)	107062
Propylene dichloride (1,2-Dichloropropane)	78875
Carbon tetrachloride	56235
Benzene	71432
Methyl hydrazine	60344
Ethyl acrylate	140885
Propylene oxide	75569
Aniline	62533
1,4-Dichlorobenzene(p)	106467
2,4,6-Trichlorophenol	88062
Bis (2-ethylhexyl) phthalate (DEHP)	117817
o-Toluidine	95534
Propoxur	114261
1,4-Dioxane (1,4-Diethyleneoxide)	123911
Acetaldehyde	75070
Bromoform	75252
Captan	133062
Epichlorohydrin	106898
Methylene chloride (Dichloromethane)	75092
Dibenz (ah) anthracene	53703
Chrysene	218019
Dimethyl aminoazobenzene	60117
Benzo (a) anthracene	56553

Chemical name	CAS No.
Benzo (b) fluoranthene	205992
Antimony trioxide	1309644
2-Nitropropane	79469
1,3-Dichloropropene	542756
7, 12-Dimethylbenz(a) anthracene	57976
Benz(c) acridine	225514
Indeno(1,2,3-cd)pyrene	193395
1,2:7,8-Dibenzopyrene	189559

[63 FR 71382, Dec. 28, 1998]

Table 5 to Subpart JJ of Part 63—List of VHAP of Potential Concern Identified by Industry

CAS No.	Chemical name	EPA de minimis, tons/yr
68122	Dimethyl formamide	1.0
50000	Formaldehyde	0.2
75092	Methylene chloride	4.0
79469	2-Nitropropane	1.0
78591	Isophorone	0.7
1000425	Styrene monomer	1.0
108952	Phenol	0.1
111422	Dimethanolamine	5.0
109864	2-Methoxyethanol	10.0
111159	2-Ethoxyethyl acetate	10.0

[63 FR 71382, Dec. 28, 1998]

Table 6 to Subpart JJ of Part 63—VHAP of Potential Concern

CAS No.	Chemical name	EPA de minimis, tons/yr*
92671	4-Aminobiphenyl	1.0
96093	Styrene oxide	1.0
64675	Diethyl sulfate	1.0
59892	N-Nitrosomorpholine	1.0
68122	Dimethyl formamide	1.0
680319	Hexamethylphosphoramide	0.01
60355	Acetamide	1.0
101779	4,4'-Methylenedianiline	1.0
90040	o-Anisidine	1.0
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.00000006
92875	Benzidine	0.00003
684935	N-Nitroso-N-methylurea	0.00002
542881	Bis(chloromethyl) ether	0.00003
79447	Dimethyl carbamoyl chloride	0.002
75558	1,2-Propylenimine (2-Methyl aziridine)	0.0003

CAS No.	Chemical name	EPA de minimis, tons/yr*
57147	1,1-Dimethyl hydrazine	0.0008
96128	1,2-Dibromo-3-chloropropane	0.001
62759	N-Nitrosodimethylamine	0.0001
50328	Benzo (a) pyrene	0.001
1336363	Polychlorinated biphenyls (Aroclors)	0.0009
76448	Heptachlor	0.002
119937	3,3'-Dimethyl benzidine	0.001
79061	Acrylamide	0.002
118741	Hexachlorobenzene	0.004
57749	Chlordane	0.005
1120714	1,3-Propane sultone	0.003
106990	1,3-Butadiene	0.007
53963	2-Acetylaminoflourine	0.0005
91941	3,3'-Dichlorobenzidine	0.02
58899	Lindane (hexachlorocyclohexane, gamma)	0.005
95807	2,4-Toluene diamine	0.002
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)	0.006
122667	1,2—Diphenylhydrazine	0.009
8001352	Toxaphene (chlorinated camphene)	0.006
121142	2,4-Dinitrotoluene	0.002
119904	3,3'-Dimethoxybenzidine	0.01
50000	Formaldehyde	0.2
101144	4,4'-Methylene bis(2-chloroaniline)	0.02
107131	Acrylonitrile	0.03
106934	Ethylene dibromide(1,2-Dibromoethane)	0.01
72559	DDE (1,1-p-chlorophenyl 1-2 dichloroethylene)	0.01
510156	Chlorobenzilate	0.04
62737	Dichlorvos	0.02
75014	Vinyl chloride	0.02
75218	Ethylene oxide	0.09
96457	Ethylene thiourea	0.06
593602	Vinyl bromide (bromoethene)	0.06
67663	Chloroform	0.09
87865	Pentachlorophenol	0.07
51796	Ethyl carbamate (Urethane)	0.08
107062	Ethylene dichloride (1,2-Dichloroethane)	0.08
78875	Propylene dichloride (1,2-Dichloropropane)	0.1
56235	Carbon tetrachloride	0.1
71432	Benzene	0.2
140885	Ethyl acrylate	0.1
75569	Propylene oxide	0.5
62533	Aniline	0.1
106467	1,4-Dichlorobenzene(p)	0.3
88062	2,4,6-Trichlorophenol	0.6

CAS No.	Chemical name	EPA de minimis, tons/yr*
117817	Bis (2-ethylhexyl) phthalate (DEHP)	0.5
95534	o-Toluidine	0.4
114261	Propoxur	2.0
79016	Trichloroethylene	1.0
123911	1,4-Dioxane (1,4-Diethyleneoxide)	0.6
75070	Acetaldehyde	0.9
75252	Bromoform	2.0
133062	Captan	2.0
106898	Epichlorohydrin	2.0
75092	Methylene chloride (Dichloromethane)	4.0
127184	Tetrachloroethylene (Perchloroethylene)	4.0
53703	Dibenz (ah) anthracene	0.01
218019	Chrysene	0.01
60117	Dimethyl aminoazobenzene	1.0
56553	Benzo (a) anthracene	0.01
205992	Benzo (b) fluoranthene	0.01
79469	2-Nitropropane	1.0
542756	1,3-Dichloropropene	1.0
57976	7,12-Dimethylbenz (a) anthracene	0.01
225514	Benz(c)acridine	0.01
193395	Indeno(1,2,3-cd)pyrene	0.01
189559	1,2:7,8-Dibenzopyrene	0.01
79345	1,1,2,2-Tetrachloroethane	0.03
91225	Quinoline	0.0006
75354	Vinylidene chloride (1,1-Dichloroethylene)	0.04
87683	Hexachlorobutadiene	0.09
82688	Pentachloronitrobenzene (Quintobenzene)	0.03
78591	Isophorone	0.7
79005	1,1,2-Trichloroethane	0.1
74873	Methyl chloride (Chloromethane)	1.0
67721	Hexachloroethane	0.5
1582098	Trifluralin	0.9
1319773	Cresols/Cresylic acid (isomers and mixture)	1.0
108394	m-Cresol	1.0
75343	Ethylidene dichloride (1,1-Dichloroethane)	1.0
95487	o-Cresol	1.0
106445	p-Cresol	1.0
74884	Methyl iodide (Iodomethane)	1.0
100425	Styrene	1.0
107051	Allyl chloride	1.0
334883	Diazomethane	1.0
95954	2,4,5—Trichlorophenol	1.0
133904	Chloramben	1.0
106887	1,2—Epoxybutane	1.0

CAS No.	Chemical name	EPA de minimis, tons/yr*
108054	Vinyl acetate	1.0
126998	Chloroprene	1.0
123319	Hydroquinone	1.0
92933	4-Nitrobiphenyl	1.0
56382	Parathion	0.1
13463393	Nickel Carbonyl	0.1
60344	Methyl hydrazine	0.006
151564	Ethylene imine	0.0003
77781	Dimethyl sulfate	0.1
107302	Chloromethyl methyl ether	0.1
57578	beta-Propiolactone	0.1
100447	Benzyl chloride	0.04
98077	Benzotrichloride	0.0006
107028	Acrolein	0.04
584849	2,4-Toluene diisocyanate	0.1
75741	Tetramethyl lead	0.01
78002	Tetraethyl lead	0.01
12108133	Methylcyclopentadienyl manganese	0.1
624839	Methyl isocyanate	0.1
77474	Hexachlorocyclopentadiene	0.1
62207765	Fluomine	0.1
10210681	Cobalt carbonyl	0.1
79118	Chloroacetic acid	0.1
534521	4,6-Dinitro-o-cresol, and salts	0.1
101688	Methylene diphenyl diisocyanate	0.1
108952	Phenol	0.1
62384	Mercury, (acetato-o) phenyl	0.01
98862	Acetophenone	1.0
108316	Maleic anhydride	1.0
532274	2-Chloroacetophenone	0.06
51285	2,4-Dinitrophenol	1.0
109864	2-Methoxy ethanol	10.0
98953	Nitrobenzene	1.0
74839	Methyl bromide (Bromomethane)	10.0
75150	Carbon disulfide	1.0
121697	N,N-Dimethylaniline	1.0
106514	Quinone	5.0
123386	Propionaldehyde	5.0
120809	Catechol	5.0
85449	Phthalic anhydride	5.0
463581	Carbonyl sulfide	5.0
132649	Dibenzofurans	5.0
100027	4-Nitrophenol	5.0
540841	2,2,4-Trimethylpentane	5.0

CAS No.	Chemical name	EPA de minimis, tons/yr*
111422	Diethanolamine	5.0
822060	Hexamethylene-1,6-diisocyanate	5.0
	Glycol ethers ^a	5.0
	Polycyclic organic matter ^b	0.01

* These values are based on the de minimis levels provided in the proposed rulemaking pursuant to section 112(g) of the Act using a 70-year lifetime exposure duration for all VHAP. Default assumptions and the de minimis values based on inhalation reference doses (RfC) are not changed by this adjustment.

^a Except for ethylene glycol butyl ether, ethylene glycol ethyl ether (2-ethoxy ethanol), ethylene glycol hexyl ether, ethylene glycol methyl ether (2-methoxyethanol), ethylene glycol phenyl ether, ethylene glycol propyl ether, ethylene glycol mono-2-ethylhexyl ether, diethylene glycol butyl ether, diethylene glycol ethyl ether, diethylene glycol methyl ether, diethylene glycol hexyl ether, diethylene glycol phenyl ether, diethylene glycol propyl ether, triethylene glycol butyl ether, triethylene glycol ethyl ether, triethylene glycol methyl ether, triethylene glycol propyl ether, ethylene glycol butyl ether acetate, ethylene glycol ethyl ether acetate, and diethylene glycol ethyl ether acetate.

^b Except for benzo(b)fluoranthene, benzo(a)anthracene, benzo(a)pyrene, 7,12-dimethylbenz(a)anthracene, benz(c)acridine, chrysene, dibenz(ah)anthracene, 1,2:7,8-dibenzopyrene, indeno(1,2,3-cd)pyrene, but including dioxins and furans.

[63 FR 71383, Dec. 28, 1998]

Attachment B
to a Part 70 Operating Permit No. T039-34286-00014

Subpart DDDD—National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

What This Subpart Covers

Source: 69 FR 46011, July 30, 2004, unless otherwise noted.

§ 63.2230 What is the purpose of this subpart?

This subpart establishes national compliance options, operating requirements, and work practice requirements for hazardous air pollutants (HAP) emitted from plywood and composite wood products (PCWP) manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the compliance options, operating requirements, and work practice requirements.

§ 63.2231 Does this subpart apply to me?

This subpart applies to you if you meet the criteria in paragraphs (a) and (b) of this section.

(a) You own or operate a PCWP manufacturing facility. A PCWP manufacturing facility is a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

(b) The PCWP manufacturing facility is located at a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

[69 FR 46011, July 30, 2004, as amended at 72 FR 61062, Oct. 29, 2007]

§ 63.2232 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing affected source at a PCWP manufacturing facility.

(b) The affected source is the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other national emission standards for hazardous air pollutants (NESHAP)). The affected source also includes onsite storage and preparation of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (§63.2292). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

(c) An affected source is a new affected source if you commenced construction of the affected source after January 9, 2003, and you meet the applicability criteria at the time you commenced construction.

(d) An affected source is reconstructed if you meet the criteria as defined in §63.2.

(e) An affected source is existing if it is not new or reconstructed.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8371, Feb. 16, 2006]

§ 63.2233 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraph (a)(1) or (2) of this section, whichever is applicable.

(1) If the initial startup of your affected source is before September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart no later than September 28, 2004.

(2) If the initial startup of your affected source is after September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart upon initial startup of your affected source.

(b) If you have an existing affected source, you must comply with the compliance options, operating requirements, and work practice requirements for existing sources no later than October 1, 2007.

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, you must be in compliance with this subpart by October 1, 2007 or upon initial startup of your affected source as a major source, whichever is later.

(d) You must meet the notification requirements according to the schedule in §63.2280 and according to 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the compliance options, operating requirements, and work practice requirements in this subpart.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006; 72 FR 61062, Oct. 29, 2007]

Compliance Options, Operating Requirements, and Work Practice Requirements

§ 63.2240 What are the compliance options and operating requirements and how must I meet them?

You must meet the compliance options and operating requirements described in Tables 1A, 1B, and 2 to this subpart and in paragraph (c) of this section by using one or more of the compliance options listed in paragraphs (a), (b), and (c) of this section. The process units subject to the compliance options are listed in Tables 1A and 1B to this subpart and are defined in §63.2292. You need only to meet one of the compliance options outlined in paragraphs (a) through (c) of this section for each process unit. You cannot combine compliance options in paragraph (a), (b), or (c) for a single process unit. (For example, you cannot use a production-based compliance option in paragraph (a) for one vent of a veneer dryer and an add-on control system compliance option in paragraph (b) for another vent on the same veneer dryer. You must use either the production-based compliance option or an add-on control system compliance option for the entire dryer.)

(a) *Production-based compliance options.* You must meet the production-based total HAP compliance options in Table 1A to this subpart and the applicable operating requirements in Table 2 to this subpart. You may not use an add-on control system or wet control device to meet the production-based compliance options.

(b) *Compliance options for add-on control systems.* You must use an emissions control system and demonstrate that the resulting emissions meet the compliance options and operating requirements in Tables 1B and 2 to this subpart. If you own or operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, and you choose to comply with one of the concentration-based compliance options for a control system outlet (presented as option numbers 2, 4, and 6 in Table 1B to this subpart),

you must have a capture device that either meets the definition of wood products enclosure in §63.2292 or achieves a capture efficiency of greater than or equal to 95 percent.

(c) *Emissions averaging compliance option (for existing sources only)*. Using the procedures in paragraphs (c)(1) through (3) of this section, you must demonstrate that emissions included in the emissions average meet the compliance options and operating requirements. New sources may not use emissions averaging to comply with this subpart.

(1) *Calculation of required and actual mass removal*. Limit emissions of total HAP, as defined in §63.2292, to include acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde from your affected source to the standard specified by Equations 1, 2, and 3 of this section.

$$RMR = 0.90 \times \left(\sum_{i=1}^n UCEP_i \times OH_i \right) \quad (Eq. 1)$$

$$AMR = \left(\sum_{i=1}^n CD_i \times OCEP_i \times OH_i \right) \quad (Eq. 2)$$

$$AMR \geq RMR \quad (Eq. 3)$$

Where:

RMR = required mass removal of total HAP from all process units generating debits (*i.e.*, all process units that are subject to the compliance options in Tables 1A and 1B to this subpart and that are either uncontrolled or under-controlled), pounds per semiannual period;

AMR = actual mass removal of total HAP from all process units generating credits (*i.e.*, all process units that are controlled as part of the Emissions Averaging Plan including credits from debit-generating process units that are under-controlled), pounds per semiannual period;

UCEP_i = mass of total HAP from an uncontrolled or under-controlled process unit (i) that generates debits, pounds per hour;

OH_i = number of hours a process unit (i) is operated during the semiannual period, hours per 6-month period;

CD_i = control system efficiency for the emission point (i) for total HAP, expressed as a fraction, and not to exceed 90 percent, unitless (Note: To calculate the control system efficiency of biological treatment units that do not meet the definition of biofilter in §63.2292, you must use 40 CFR part 63, appendix C, Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit.);

OCEP_i = mass of total HAP from a process unit (i) that generates credits (including credits from debit-generating process units that are under-controlled), pounds per hour;

0.90 = required control system efficiency of 90 percent multiplied, unitless.

(2) *Requirements for debits and credits*. You must calculate debits and credits as specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) You must limit process units in the emissions average to those process units located at the existing affected source as defined in §63.2292.

(ii) You cannot use nonoperating process units to generate emissions averaging credits. You cannot use process units that are shut down to generate emissions averaging debits or credits.

(iii) You may not include in your emissions average process units controlled to comply with a State, Tribal, or Federal rule other than this subpart.

(iv) You must use actual measurements of total HAP emissions from process units to calculate your required mass removal (RMR) and actual mass removal (AMR). The total HAP measurements must be obtained according to §63.2262(b) through (d), (g), and (h), using the methods specified in Table 4 to this subpart.

(v) Your initial demonstration that the credit-generating process units will be capable of generating enough credits to offset the debits from the debit-generating process units must be made under representative operating conditions. After the compliance date, you must use actual operating data for all debit and credit calculations.

(vi) Do not include emissions from the following time periods in your emissions averaging calculations:

(A) Emissions during periods of startup, shutdown, and malfunction as described in the startup, shutdown, and malfunction plan (SSMP).

(B) Emissions during periods of monitoring malfunctions, associated repairs, and required quality assurance or control activities or during periods of control device maintenance covered in your routine control device maintenance exemption. No credits may be assigned to credit-generating process units, and maximum debits must be assigned to debit-generating process units during these periods.

(3) *Operating requirements.* You must meet the operating requirements in Table 2 to this subpart for each process unit or control device used in calculation of emissions averaging credits.

§ 63.2241 What are the work practice requirements and how must I meet them?

(a) You must meet each work practice requirement in Table 3 to this subpart that applies to you.

(b) As provided in §63.6(g), we, the EPA, may choose to grant you permission to use an alternative to the work practice requirements in this section.

(c) If you have a dry rotary dryer, you may choose to designate your dry rotary dryer as a green rotary dryer and meet the more stringent compliance options and operating requirements in §63.2240 for green rotary dryers instead of the work practices for dry rotary dryers. If you have a hardwood veneer dryer or veneer redryer, you may choose to designate your hardwood veneer dryer or veneer redryer as a softwood veneer dryer and meet the more stringent compliance options and operating requirements in §63.2240 for softwood veneer dryer heated zones instead of the work practices for hardwood veneer dryers or veneer redryers.

General Compliance Requirements

§ 63.2250 What are the general requirements?

(a) You must be in compliance with the compliance options, operating requirements, and the work practice requirements in this subpart at all times, except during periods of process unit or control device startup, shutdown, and malfunction; prior to process unit initial startup; and during the routine control device maintenance exemption specified in §63.2251. The compliance options, operating requirements, and work practice requirements do not apply during times when the process unit(s) subject to the compliance options, operating requirements, and work practice requirements are not operating, or during periods of startup, shutdown, and malfunction. Startup and shutdown periods must not exceed the minimum amount of time necessary for these events.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i).

(c) You must develop a written SSMP according to the provisions in §63.6(e)(3).

(d) Shutoff of direct-fired burners resulting from partial and full production stoppages of direct-fired softwood veneer dryers or over-temperature events shall be deemed shutdowns and not malfunctions. Lighting or re-lighting any one or all gas burners in direct-fired softwood veneer dryers shall be deemed startups and not malfunctions.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006; 71 FR 20463, Apr. 20, 2006]

§ 63.2251 What are the requirements for the routine control device maintenance exemption?

(a) You may request a routine control device maintenance exemption from the EPA Administrator for routine maintenance events such as control device bakeouts, washouts, media replacement, and replacement of corroded parts. Your request must justify the need for the routine maintenance on the control device and the time required to accomplish the maintenance activities, describe the maintenance activities and the frequency of the maintenance activities, explain why the maintenance cannot be accomplished during process shutdowns, describe how you plan to make reasonable efforts to minimize emissions during the maintenance, and provide any other documentation required by the EPA Administrator.

(b) The routine control device maintenance exemption must not exceed the percentages of process unit operating uptime in paragraphs (b)(1) and (2) of this section.

(1) If the control device is used to control a green rotary dryer, tube dryer, rotary strand dryer, or pressurized refiner, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(2) If the control device is used to control a softwood veneer dryer, reconstituted wood product press, reconstituted wood product board cooler, hardboard oven, press predryer, conveyor strand dryer, or fiberboard mat dryer, then the routine control device maintenance exemption must not exceed 0.5 percent of annual operating uptime for each process unit controlled.

(3) If the control device is used to control a combination of equipment listed in both paragraphs (b)(1) and (2) of this section, such as a tube dryer and a reconstituted wood product press, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(c) The request for the routine control device maintenance exemption, if approved by the EPA Administrator, must be IBR in and attached to the affected source's title V permit.

(d) The compliance options and operating requirements do not apply during times when control device maintenance covered under your approved routine control device maintenance exemption is performed. You must minimize emissions to the greatest extent possible during these routine control device maintenance periods.

(e) To the extent practical, startup and shutdown of emission control systems must be scheduled during times when process equipment is also shut down.

§ 63.2252 What are the requirements for process units that have no control or work practice requirements?

For process units not subject to the compliance options or work practice requirements specified in §63.2240 (including, but not limited to, lumber kilns), you are not required to comply with the compliance options, work practice requirements, performance testing, monitoring, SSM plans, and recordkeeping or reporting requirements of this subpart, or any other requirements in subpart A of this part, except for the initial notification requirements in §63.9(b).

[71 FR 8372, Feb. 16, 2006]

Initial Compliance Requirements

§ 63.2260 How do I demonstrate initial compliance with the compliance options, operating requirements, and work practice requirements?

(a) To demonstrate initial compliance with the compliance options and operating requirements, you must conduct performance tests and establish each site-specific operating requirement in Table 2 to this subpart according to the requirements in §63.2262 and Table 4 to this subpart. Combustion units that accept process exhausts into the flame zone are exempt from the initial performance testing and operating requirements for thermal oxidizers.

(b) You must demonstrate initial compliance with each compliance option, operating requirement, and work practice requirement that applies to you according to Tables 5 and 6 to this subpart and according to §§63.2260 through 63.2269 of this subpart.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.2280(d).

§ 63.2261 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct performance tests upon initial startup or no later than 180 calendar days after the compliance date that is specified for your source in §63.2233 and according to §63.7(a)(2), whichever is later.

(b) You must conduct initial compliance demonstrations that do not require performance tests upon initial startup or no later than 30 calendar days after the compliance date that is specified for your source in §63.2233, whichever is later.

§ 63.2262 How do I conduct performance tests and establish operating requirements?

(a) You must conduct each performance test according to the requirements in §63.7(e)(1), the requirements in paragraphs (b) through (o) of this section, and according to the methods specified in Table 4 to this subpart.

(b) *Periods when performance tests must be conducted.* (1) You must not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(2) You must test under representative operating conditions as defined in §63.2292. You must describe representative operating conditions in your performance test report for the process and control systems and explain why they are representative.

(c) *Number of test runs.* 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 except for: testing of a temporary total enclosure (TTE) conducted using Methods 204A through 204F of 40 CFR part 51, appendix M, which require three separate test runs of at least 3 hours each; and testing of an enclosure conducted using the alternative tracer gas method in appendix A to this subpart, which requires a minimum of three separate runs of at least 20 minutes each.

(d) *Location of sampling sites.* (1) Sampling sites must be located at the inlet (if emission reduction testing or documentation of inlet methanol or formaldehyde concentration is required) and outlet of the control device (defined in §63.2292) and prior to any releases to the atmosphere. For control sequences with wet control devices (defined in §63.2292) followed by control devices (defined in §63.2292), sampling sites may be located at the inlet and outlet of the control sequence and prior to any releases to the atmosphere.

(2) Sampling sites for process units meeting compliance options without a control device must be located prior to any releases to the atmosphere. Facilities demonstrating compliance with a production-based compliance option for a process unit equipped with a wet control device must locate sampling sites prior to the wet control device.

(e) *Collection of monitoring data.* You must collect operating parameter monitoring system or continuous emissions monitoring system (CEMS) data at least every 15 minutes during the entire performance test and determine the parameter or concentration value for the operating requirement during the performance test using the methods specified in paragraphs (k) through (o) of this section.

(f) *Collection of production data.* To comply with any of the production-based compliance options, you must measure and record the process unit throughput during each performance test.

(g) *Nondetect data.* (1) Except as specified in paragraph (g)(2) of this section, all nondetect data (§63.2292) must be treated as one-half of the method detection limit when determining total HAP, formaldehyde, methanol, or total hydrocarbon (THC) emission rates.

(2) When showing compliance with the production-based compliance options in Table 1A to this subpart, you may treat emissions of an individual HAP as zero if all three of the performance test runs result in a nondetect measurement, and the method detection limit is less than or equal to 1 parts per million by volume, dry basis (ppmvd). Otherwise, nondetect data for individual HAP must be treated as one-half of the method detection limit.

(h) *Calculation of percent reduction across a control system.* When determining the control system efficiency for any control system included in your emissions averaging plan (not to exceed 90 percent) and when complying with any of the compliance options based on percent reduction across a control system in Table 1B to this subpart, as part of the performance test, you must calculate the percent reduction using Equation 1 of this section:

$$PR = CE \times \frac{ER_{in} - ER_{out}}{ER_{in}} (100) \quad (Eq. 1)$$

Where:

PR = percent reduction, percent;

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 to this subpart);

ER_{in} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the inlet vent stream of the control device, pounds per hour;

ER_{out} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the outlet vent stream of the control device, pounds per hour.

(i) *Calculation of mass per unit production.* To comply with any of the production-based compliance options in Table 1A to this subpart, you must calculate your mass per unit production emissions for each performance test run using Equation 2 of this section:

$$MP = \frac{ER_{HAP}}{P \times CE} \quad (Eq. 2)$$

Where:

MP = mass per unit production, pounds per oven dried ton OR pounds per thousand square feet on a specified thickness basis (see paragraph (j) of this section if you need to convert from one thickness basis to another);

ER_{HAP} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) in the stack, pounds per hour;

P = process unit production rate (throughput), oven dried tons per hour OR thousand square feet per hour on a specified thickness basis;

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 to this subpart).

(j) *Thickness basis conversion.* Use Equation 3 of this section to convert from one thickness basis to another:

$$MSF_B = MSF_A \times \frac{A}{B} \quad (\text{Eq. 3})$$

Where:

MSF_A = thousand square feet on an A-inch basis;

MSF_B = thousand square feet on a B-inch basis;

A = old thickness you are converting from, inches;

B = new thickness you are converting to, inches.

(k) *Establishing thermal oxidizer operating requirements.* If you operate a thermal oxidizer, you must establish your thermal oxidizer operating parameters according to paragraphs (k)(1) through (3) of this section.

(1) During the performance test, you must continuously monitor the firebox temperature during each of the required 1-hour test runs. For regenerative thermal oxidizers, you may measure the temperature in multiple locations (e.g. , one location per burner) in the combustion chamber and calculate the average of the temperature measurements prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum firebox temperature. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum firebox temperature for your thermal oxidizer by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (k)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(3) If your thermal oxidizer is a combustion unit that accepts process exhaust into the flame zone, then you are exempt from the performance testing and monitoring requirements specified in paragraphs (k)(1) and (2) of this section. To demonstrate initial compliance, you must submit documentation with your Notification of Compliance Status showing that process exhausts controlled by the combustion unit enter into the flame zone.

(l) *Establishing catalytic oxidizer operating requirements.* If you operate a catalytic oxidizer, you must establish your catalytic oxidizer operating parameters according to paragraphs (l)(1) and (2) of this section.

(1) During the performance test, you must continuously monitor during the required 1-hour test runs either the temperature at the inlet to each catalyst bed or the temperature in the combustion chamber. For regenerative catalytic oxidizers, you must calculate the average of the temperature measurements from each catalyst bed inlet or within the combustion chamber prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum catalytic oxidizer temperature. The minimum catalytic oxidizer temperature must then be established as the average of the three minimum 15-minute temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum catalytic oxidizer temperature by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraphs (l)(1) and (2) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(m) *Establishing biofilter operating requirements.* If you operate a biofilter, you must establish your biofilter operating requirements according to paragraphs (m)(1) through (3) of this section.

(1) During the performance test, you must continuously monitor the biofilter bed temperature during each of the required 1-hour test runs. To monitor biofilter bed temperature, you may use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15-minute averages for purposes of establishing biofilter bed temperature limits. The biofilter bed temperature range must be established as the minimum and maximum 15-minute biofilter bed temperatures monitored during the three test runs. You may base your biofilter bed temperature range on values recorded during previous performance tests provided that the data used to establish the temperature ranges have been obtained using the test methods required in this subpart. If you use data from previous performance tests, you must certify that the biofilter and associated process unit(s) have not been modified subsequent to the date of the performance tests. Replacement of the biofilter media with the same type of material is not considered a modification of the biofilter for purposes of this section.

(2) For a new biofilter installation, you will be allowed up to 180 days following the compliance date or 180 days following initial startup of the biofilter to complete the requirements in paragraph (m)(1) of this section.

(3) You may expand your biofilter bed temperature operating range by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (m)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(n) *Establishing operating requirements for process units meeting compliance options without a control device.* If you operate a process unit that meets a compliance option in Table 1A to this subpart, or is a process unit that generates debits in an emissions average without the use of a control device, you must establish your process unit operating parameters according to paragraphs (n)(1) through (2) of this section.

(1) During the performance test, you must identify and document the process unit controlling parameter(s) that affect total HAP emissions during the three-run performance test. The controlling parameters you identify must coincide with the representative operating conditions you describe according to §63.2262(b)(2). For each parameter, you must specify appropriate monitoring methods, monitoring frequencies, and for continuously monitored parameters, averaging times not to exceed 24 hours. The operating limit for each controlling parameter must then be established as the minimum, maximum, range, or average (as appropriate depending on the parameter) recorded during the performance test. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish different controlling parameter limits for your process unit by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (n)(1) of this section that demonstrates compliance with the compliance options in Table 1A to this subpart or is used to establish emission averaging debits for an uncontrolled process unit.

(o) *Establishing operating requirements using THC CEMS.* If you choose to meet the operating requirements by monitoring THC concentration instead of monitoring control device or process operating parameters, you must establish your THC concentration operating requirement according to paragraphs (o)(1) through (2) of this section.

(1) During the performance test, you must continuously monitor THC concentration using your CEMS during each of the required 1-hour test runs. The maximum THC concentration must then be established as the average of the three maximum 15-minute THC concentrations monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of THC concentration values under different operating conditions.

(2) You may establish a different maximum THC concentration by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (o)(1) of this section that demonstrates compliance with the compliance options in Tables 1A and 1B to this subpart.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

§ 63.2263 Initial compliance demonstration for a dry rotary dryer.

If you operate a dry rotary dryer, you must demonstrate that your dryer processes furnish with an inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a dryer inlet temperature of less than or equal to 600 °F. You must designate and clearly identify each dry rotary dryer. You must record the inlet furnish moisture content (dry basis) and inlet dryer operating temperature according to §63.2269(a), (b), and (c) and §63.2270 for a minimum of 30 calendar days. You must submit the highest recorded 24-hour average inlet furnish moisture content and the highest recorded 24-hour average dryer inlet temperature with your Notification of Compliance Status. In addition, you must submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the dry rotary dryer will dry furnish with a maximum inlet moisture content less than or equal to 30 percent (by weight, dry basis) and will operate with a maximum inlet temperature of less than or equal to 600 °F in the future.

§ 63.2264 Initial compliance demonstration for a hardwood veneer dryer.

If you operate a hardwood veneer dryer, you must record the annual volume percentage of softwood veneer species processed in the dryer as follows:

(a) Use Equation 1 of this section to calculate the annual volume percentage of softwood species dried:

$$SW_{\%} = \frac{SW}{T} (100) \quad (Eq. 1)$$

Where:

SW%= annual volume percent softwood species dried;

SW = softwood veneer dried during the previous 12 months, thousand square feet (3/8-inch basis);

T = total softwood and hardwood veneer dried during the previous 12 months, thousand square feet (3/8-inch basis).

(b) You must designate and clearly identify each hardwood veneer dryer. Submit with the Notification of Compliance Status the annual volume percentage of softwood species dried in the dryer based on your dryer production for the 12 months prior to the compliance date specified for your source in §63.2233. If you did not dry any softwood species in the dryer during the 12 months prior to the compliance date, then you need only to submit a statement indicating that no softwood species were dried. In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer dryer will be used to process less than 30 volume percent softwood species in the future.

§ 63.2265 Initial compliance demonstration for a softwood veneer dryer.

If you operate a softwood veneer dryer, you must develop a plan for review and approval for minimizing fugitive emissions from the veneer dryer heated zones, and you must submit the plan with your Notification of Compliance Status.

§ 63.2266 Initial compliance demonstration for a veneer redryer.

If you operate a veneer redryer, you must record the inlet moisture content of the veneer processed in the redryer according to §63.2269(a) and (c) and §63.2270 for a minimum of 30 calendar days. You must designate and clearly identify each veneer redryer. You must submit the highest recorded 24-hour average inlet veneer moisture content with your Notification of Compliance Status to show that your veneer redryer processes veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis). In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer redryer will dry veneer with a moisture content less than 25 percent (by weight, dry basis) in the future.

§ 63.2267 Initial compliance demonstration for a reconstituted wood product press or board cooler.

If you operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, then you must either use a wood products enclosure as defined in §63.2292 or measure the capture efficiency of the capture device for the press or board cooler using Methods 204 and 204A through 204F of 40 CFR part 51, appendix M (as appropriate), or using the alternative tracer gas method contained in appendix A to this subpart. You must submit documentation that the wood products enclosure meets the press enclosure design criteria in §63.2292 or the results of the capture efficiency verification with your Notification of Compliance Status.

§ 63.2268 Initial compliance demonstration for a wet control device.

If you use a wet control device as the sole means of reducing HAP emissions, you must develop and implement a plan for review and approval to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere such that the desired emissions reductions are obtained. You must submit the plan with your Notification of Compliance Status.

§ 63.2269 What are my monitoring installation, operation, and maintenance requirements?

(a) *General continuous parameter monitoring requirements.* You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to paragraphs (a)(1) through (3) of this section.

(1) The CPMS must be capable of completing a minimum of one cycle of operation (sampling, analyzing, and recording) for each successive 15-minute period.

(2) At all times, you must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(3) Record the results of each inspection, calibration, and validation check.

(b) *Temperature monitoring.* For each temperature monitoring device, you must meet the requirements in paragraphs (a) and (b)(1) through (6) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) Use a temperature sensor with a minimum accuracy of 4 °F or 0.75 percent of the temperature value, whichever is larger.

(3) If a chart recorder is used, it must have a sensitivity with minor divisions not more than 20 °F.

(4) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must 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 30 °F of the process temperature sensor's reading.

(5) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(6) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion.

(c) *Wood moisture monitoring.* For each furnish or veneer moisture meter, you must meet the requirements in paragraphs (a)(1) through (3) and paragraphs (c)(1) through (5) of this section.

- (1) For dry rotary dryers, use a continuous moisture monitor with a minimum accuracy of 1 percent (dry basis) moisture or better in the 25 to 35 percent (dry basis) moisture content range. For veneer redryers, use a continuous moisture monitor with a minimum accuracy of 3 percent (dry basis) moisture or better in the 15 to 25 percent (dry basis) moisture content range. Alternatively, you may use a continuous moisture monitor with a minimum accuracy of 5 percent (dry basis) moisture or better for dry rotary dryers used to dry furnish with less than 25 percent (dry basis) moisture or for veneer redryers used to redry veneer with less than 20 percent (dry basis) moisture.
- (2) Locate the moisture monitor in a position that provides a representative measure of furnish or veneer moisture.
- (3) Calibrate the moisture monitor based on the procedures specified by the moisture monitor manufacturer at least once per semiannual compliance period (or more frequently if recommended by the moisture monitor manufacturer).
- (4) At least quarterly, inspect all components of the moisture monitor for integrity and all electrical connections for continuity.
- (5) Use Equation 1 of this section to convert percent moisture measurements wet basis to a dry basis:

$$MC_{dry} = \frac{MC_{wet}/100}{1 - (MC_{wet}/100)} (100) \quad (Eq. 1)$$

Where:

MC_{dry} = percent moisture content of wood material (weight percent, dry basis);

MC_{wet} = percent moisture content of wood material (weight percent, wet basis).

(d) *Continuous emission monitoring system(s)*. Each CEMS must be installed, operated, and maintained according to paragraphs (d)(1) through (4) of this section.

- (1) Each CEMS for monitoring THC concentration must be installed, operated, and maintained according to Performance Specification 8 of 40 CFR part 60, appendix B. You must also comply with Procedure 1 of 40 CFR part 60, appendix F.
- (2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8 and according to Performance Specification 8 of 40 CFR part 60, appendix B.
- (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.
- (4) The CEMS data must be reduced as specified in §63.8(g)(2) and §63.2270(d) and (e).

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

Continuous Compliance Requirements

§ 63.2270 How do I monitor and collect data to demonstrate continuous compliance?

- (a) You must monitor and collect data according to this section.
- (b) Except for, as appropriate, monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the process unit is operating. For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in

assessing compliance. 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. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities; data recorded during periods of startup, shutdown, and malfunction; or data recorded during periods of control device downtime covered in any approved routine control device maintenance exemption in data averages and calculations used to report emission or operating levels, nor may such data be used in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control system.

(d) Except as provided in paragraph (e) of this section, determine the 3-hour block average of all recorded readings, calculated after every 3 hours of operation as the average of the evenly spaced recorded readings in the previous 3 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

(e) For dry rotary dryer and veneer redryer wood moisture monitoring, dry rotary dryer temperature monitoring, biofilter bed temperature monitoring, and biofilter outlet THC monitoring, determine the 24-hour block average of all recorded readings, calculated after every 24 hours of operation as the average of the evenly spaced recorded readings in the previous 24 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

(f) To calculate the data averages for each 3-hour or 24-hour averaging period, you must have at least 75 percent of the required recorded readings for that period using only recorded readings that are based on valid data (*i.e.* , not from periods described in paragraphs (b) and (c) of this section).

§ 63.2271 How do I demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements?

(a) You must demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements in §§63.2240 and 63.2241 that apply to you according to the methods specified in Tables 7 and 8 to this subpart.

(b) You must report each instance in which you did not meet each compliance option, operating requirement, and work practice requirement in Tables 7 and 8 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction and periods of control device maintenance specified in paragraphs (b)(1) through (3) of this section. These instances are deviations from the compliance options, operating requirements, and work practice requirements in this subpart. These deviations must be reported according to the requirements in §63.2281.

(1) [Reserved]

(2) Consistent with §§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 EPA Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The EPA 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).

(3) Deviations that occur during periods of control device maintenance covered by any approved routine control device maintenance exemption are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with the approved routine control device maintenance exemption.

[69 FR 46011, July 30, 2004, as amended at 71 FR 20463, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.2280 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) by the dates specified.

(b) You must submit an Initial Notification no later than 120 calendar days after September 28, 2004, or after initial startup, whichever is later, as specified in §63.9(b)(2).

(c) If you are required to conduct a performance test, you must submit a written notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as specified in §63.7(b)(1).

(d) If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Tables 4, 5, and 6 to this subpart, you must submit a Notification of Compliance Status as specified in §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 or 6 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 calendar day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Tables 5 and 6 to this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, 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 §63.10(d)(2).

(e) If you request a routine control device maintenance exemption according to §63.2251, you must submit your request for the exemption no later than 30 days before the compliance date.

(f) If you use the emissions averaging compliance option in §63.2240(c), you must submit an Emissions Averaging Plan to the EPA Administrator for approval no later than 1 year before the compliance date or no later than 1 year before the date you would begin using an emissions average, whichever is later. The Emissions Averaging Plan must include the information in paragraphs (f)(1) through (6) of this section.

(1) Identification of all the process units to be included in the emissions average indicating which process units will be used to generate credits, and which process units that are subject to compliance options in Tables 1A and 1B to this subpart will be uncontrolled (used to generate debits) or under-controlled (used to generate debits and credits).

(2) Description of the control system used to generate emission credits for each process unit used to generate credits.

(3) Determination of the total HAP control efficiency for the control system used to generate emission credits for each credit-generating process unit.

(4) Calculation of the RMR and AMR, as calculated using Equations 1 through 3 of §63.2240(c)(1).

(5) Documentation of total HAP measurements made according to §63.2240(c)(2)(iv) and other relevant documentation to support calculation of the RMR and AMR.

(6) A summary of the operating parameters you will monitor and monitoring methods for each debit-generating and credit-generating process unit.

(g) You must notify the EPA Administrator within 30 days before you take any of the actions specified in paragraphs (g)(1) through (3) of this section.

(1) You modify or replace the control system for any process unit subject to the compliance options and operating requirements in this subpart.

(2) You shut down any process unit included in your Emissions Averaging Plan.

(3) You change a continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit or control device.

§ 63.2281 What reports must I submit and when?

- (a) You must submit each report in Table 9 to this subpart that applies to you.
- (b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 9 to this subpart and as specified in paragraphs (b)(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 affected source in §63.2233 ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. For example, if your compliance date is March 1, then the first semiannual reporting period would begin on March 1 and end on December 31.
- (2) The first compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.
- (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 for the semiannual reporting period ending on June 30 and December 31, respectively.
- (5) For each affected source 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 §70.6(a)(3)(iii)(A) or §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 (4) of this section.
- (c) The compliance report must contain the information in paragraphs (c)(1) 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 actions consistent with your SSMP, the compliance report must include the information specified in §63.10(d)(5)(i).
- (5) A description of control device maintenance performed while the control device was offline and one or more of the process units controlled by the control device was operating, including the information specified in paragraphs (c)(5)(i) through (iii) of this section.
- (i) The date and time when the control device was shut down and restarted.
- (ii) Identification of the process units that were operating and the number of hours that each process unit operated while the control device was offline.
- (iii) A statement of whether or not the control device maintenance was included in your approved routine control device maintenance exemption developed pursuant to §63.2251. If the control device maintenance was included in your approved routine control device maintenance exemption, then you must report the information in paragraphs (c)(5)(iii)(A) through (C) of this section.
- (A) The total amount of time that each process unit controlled by the control device operated during the semiannual compliance period and during the previous semiannual compliance period.

(B) The amount of time that each process unit controlled by the control device operated while the control device was down for maintenance covered under the routine control device maintenance exemption during the semiannual compliance period and during the previous semiannual compliance period.

(C) Based on the information recorded under paragraphs (c)(5)(iii)(A) and (B) of this section for each process unit, compute the annual percent of process unit operating uptime during which the control device was offline for routine maintenance using Equation 1 of this section.

$$RM = \frac{DT_p + DT_c}{PU_p + PU_c} \quad (Eq. 1)$$

Where:

RM = Annual percentage of process unit uptime during which control device is down for routine control device maintenance;

PU_p = Process unit uptime for the previous semiannual compliance period;

PU_c = Process unit uptime for the current semiannual compliance period;

DT_p = Control device downtime claimed under the routine control device maintenance exemption for the previous semiannual compliance period;

DT_c = Control device downtime claimed under the routine control device maintenance exemption for the current semiannual compliance period.

(6) The results of any performance tests conducted during the semiannual reporting period.

(7) If there are no deviations from any applicable compliance option or operating requirement, and there are no deviations from the requirements for work practice requirements in Table 8 to this subpart, a statement that there were no deviations from the compliance options, operating requirements, or work practice requirements during the reporting period.

(8) 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 a compliance option or operating requirement and for each deviation from the work practice requirements in Table 8 to this subpart that occurs at an affected source where you are not using a CMS to comply with the compliance options, operating requirements, or work practice requirements in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (6) of this section and in paragraphs (d)(1) and (2) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(1) The total operating time of each affected source 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 a compliance option or operating requirement occurring at an affected source where you are using a CMS to comply with the compliance options and operating requirements in this subpart, you must include the information in paragraphs (c)(1) through (6) and paragraphs (e)(1) through (11) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

- (1) The date and time that each malfunction started and stopped.
 - (2) The date and time 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 startup, shutdown, or malfunction; during a period of control device maintenance covered in your approved routine control device maintenance exemption; 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 startup, shutdown, control system problems, control device maintenance, 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 source operating time during that reporting period.
 - (8) A brief description of the process units.
 - (9) A brief description of the CMS.
 - (10) The date of the latest CMS certification or audit.
 - (11) A description of any changes in CMS, processes, or controls since the last reporting period.
- (f) If you comply with the emissions averaging compliance option in §63.2240(c), you must include in your semiannual compliance report calculations based on operating data from the semiannual reporting period that demonstrate that actual mass removal equals or exceeds the required mass removal.
- (g) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 9 to this subpart along with, or as part of, the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any compliance option, operating requirement, or work practice requirement 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 permitting authority.

§ 63.2282 What records must I keep?

- (a) You must keep the records listed 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 in §63.10(b)(2)(xiv).
 - (2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
 - (3) Documentation of your approved routine control device maintenance exemption, if you request such an exemption under §63.2251.
 - (4) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

- (b) You must keep the records required in Tables 7 and 8 to this subpart to show continuous compliance with each compliance option, operating requirement, and work practice requirement that applies to you.
- (c) For each CEMS, you must keep the following records.
- (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 testing 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.
- (d) If you comply with the emissions averaging compliance option in §63.2240(c), you must keep records of all information required to calculate emission debits and credits.
- (e) If you operate a catalytic oxidizer, you must keep records of annual catalyst activity checks and subsequent corrective actions.

§ 63.2283 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 as specified in §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 on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

Other Requirements and Information

§ 63.2290 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.13 apply to you.

§ 63.2291 Who implements and enforces this subpart?

- (a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.
- (c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.
- (1) Approval of alternatives to the compliance options, operating requirements, and work practice requirements in §§63.2240 and 63.2241 as specified in §63.6(g). For the purposes of delegation authority under 40 CFR part 63, subpart E, "compliance options" represent "emission limits"; "operating requirements" represent "operating limits"; and "work practice requirements" represent "work practice standards."

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

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

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

[69 FR 46011, July 30, 2004, as amended at 72 FR 61063, Oct. 29, 2007]

§ 63.2292 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, and in this section as follows:

Affected source means the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other NESHAP). The affected source also includes onsite storage of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (defined elsewhere in this section). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

Agricultural fiber means the fiber of an annual agricultural crop. Examples of agricultural fibers include, but are not limited to, wheat straw, rice straw, and bagasse.

Biofilter means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid media (such as bark) and use microbiological activity to transform organic pollutants in a process exhaust stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment systems such as aeration lagoons or activated sludge systems are not considered to be biofilters.

Capture device means a hood, enclosure, or other means of collecting emissions into a duct so that the emissions can be measured.

Capture efficiency means the fraction (expressed as a percentage) of the pollutants from an emission source that are collected by a capture device.

Catalytic oxidizer means a control system that combusts or oxidizes, in the presence of a catalyst, exhaust gas from a process unit. Catalytic oxidizers include regenerative catalytic oxidizers and thermal catalytic oxidizers.

Combustion unit means a dryer burner, process heater, or boiler. Combustion units may be used for combustion of organic HAP emissions.

Control device means any equipment that reduces the quantity of HAP emitted to the air. The device may destroy the HAP or secure the HAP for subsequent recovery. Control devices include, but are not limited to, thermal or catalytic oxidizers, combustion units that incinerate process exhausts, biofilters, and condensers.

Control system or add-on control system means the combination of capture and control devices used to reduce HAP emissions to the atmosphere.

Conveyor strand dryer means a conveyor dryer used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *conveyor strand dryer* is a process unit.

Conveyor strand dryer zone means each portion of a conveyor strand dryer with a separate heat exchange system and exhaust vent(s). Conveyor strand dryers contain multiple zones (e.g., three zones), which may be divided into multiple sections.

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 compliance option, operating requirement, or work practice 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 affected source required to obtain such a permit; or
- (3) Fails to meet any compliance option, operating requirement, or work practice requirement 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.

Direct-fired process unit means a process unit that is heated by the passing of combustion exhaust through the process unit such that the process material is contacted by the combustion exhaust.

Dryer heated zones means the zones of a softwood veneer dryer or fiberboard mat dryer that are equipped with heating and hot air circulation units. The cooling zone(s) of the dryer through which ambient air is blown are not part of the dryer heated zones.

Dry forming means the process of making a mat of resinated fiber to be compressed into a reconstituted wood product such as particleboard, oriented strandboard, medium density fiberboard, or hardboard.

Dry rotary dryer means a rotary dryer that dries wood particles or fibers with a maximum inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a maximum inlet temperature of less than or equal to 600 °F. A dry rotary dryer is a process unit.

Engineered wood product means a product made with lumber, veneers, strands of wood, or from other small wood elements that are bound together with resin. Engineered wood products include, but are not limited to, laminated strand lumber, laminated veneer lumber, parallel strand lumber, wood I-joists, and glue-laminated beams.

Fiber means the discrete elements of wood or similar cellulosic material, which are separated by mechanical means, as in refining, that can be formed into boards.

Fiberboard means a composite panel composed of cellulosic fibers (usually wood or agricultural material) made by wet forming and compacting a mat of fibers. Fiberboard density generally is less than 0.50 grams per cubic centimeter (31.5 pounds per cubic foot).

Fiberboard mat dryer means a dryer used to reduce the moisture of wet-formed wood fiber mats by applying heat. A *fiberboard mat dryer* is a process unit.

Flame zone means the portion of the combustion chamber in a combustion unit that is occupied by the flame envelope.

Furnish means the fibers, particles, or strands used for making boards.

Glue-laminated beam means a structural wood beam made by bonding lumber together along its faces with resin.

Green rotary dryer means a rotary dryer that dries wood particles or fibers with an inlet moisture content of greater than 30 percent (by weight, dry basis) at any dryer inlet temperature or operates with an inlet temperature of greater than 600 °F with any inlet moisture content. A *green rotary dryer* is a process unit.

Group 1 miscellaneous coating operations means application of edge seals, nail lines, logo (or other information) paint, shelving edge fillers, trademark/gradestamp inks, and wood putty patches to plywood and composite wood products (except kiln-dried lumber) on the same site where the plywood and composite wood products are manufactured. Group 1 miscellaneous coating operations also include application of synthetic patches to plywood at new affected sources.

Hardboard means a composite panel composed of inter-felted cellulosic fibers made by dry or wet forming and pressing of a resinated fiber mat. Hardboard generally has a density of 0.50 grams per cubic centimeter (31.5 pounds per cubic foot) or greater.

Hardboard oven means an oven used to heat treat or temper hardboard after hot pressing. Humidification chambers are not considered as part of hardboard ovens. A *hardboard oven* is a process unit.

Hardwood means the wood of a broad-leafed tree, either deciduous or evergreen. Examples of hardwoods include, but are not limited to, aspen, birch, poplar, and oak.

Hardwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium on rollers, belts, cables, or wire mesh. Hardwood veneer dryers are used to dry veneer with less than 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be hardwood veneer dryers. A *hardwood veneer dryer* is a process unit.

Kiln-dried lumber means solid wood lumber that has been dried in a lumber kiln.

Laminated strand lumber (LSL) means a composite product formed into a billet made of thin wood strands cut from whole logs, resinated, and pressed together with the grain of each strand oriented parallel to the length of the finished product.

Laminated veneer lumber (LVL) means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. *Laminated veneer lumber* is also known as parallel strand lumber (PSL).

Lumber means boards or planks sawed or split from logs or timber, including logs or timber processed for use as utility poles or other wood components. Lumber can be either green (non-dried) or dried. Lumber is typically either air-dried or kiln-dried.

Lumber kiln means an enclosed dryer operated by applying heat to reduce the moisture content of lumber.

Medium density fiberboard (MDF) means a composite panel composed of cellulosic fibers (usually wood or agricultural fiber) made by dry forming and pressing of a resinated fiber mat.

Method detection limit means the minimum concentration of an analyte that can be determined with 99 percent confidence that the true value is greater than zero.

Miscellaneous coating operations means application of any of the following to plywood or composite wood products: edge seals, moisture sealants, anti-skid coatings, company logos, trademark or grade stamps, nail lines, synthetic patches, wood patches, wood putty, concrete forming oils, glues for veneer composing, and shelving edge fillers. Miscellaneous coating operations also include the application of primer to oriented strandboard siding that occurs at the same site as oriented strandboard manufacture and application of asphalt, clay slurry, or titanium dioxide coatings to fiberboard at the same site of fiberboard manufacture.

Molded particleboard means a shaped composite product (other than a composite panel) composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

MSF means thousand square feet (92.9 square meters). Square footage of panels is usually measured on a thickness basis, such as 3/8-inch, to define the total volume of panels. Equation 6 of §63.2262(j) shows how to convert from one thickness basis to another.

Nondetect data means, for the purposes of this subpart, any value that is below the method detection limit.

Non-HAP coating means a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds.

1-hour period means a 60-minute period.

Oriented strandboard (OSB) means a composite panel produced from thin wood strands cut from whole logs, formed into resinated layers (with the grain of strands in one layer oriented perpendicular to the strands in adjacent layers), and pressed.

Oven-dried ton(s) (ODT) means tons of wood dried until all of the moisture in the wood is removed. One oven-dried ton equals 907 oven-dried kilograms.

Parallel strand lumber (PSL) means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. *Parallel strand lumber* is also known as laminated veneer lumber (LVL).

Partial wood products enclosure means an enclosure that does not meet the design criteria for a wood products enclosure as defined in this subpart.

Particle means a discrete, small piece of cellulosic material (usually wood or agricultural fiber) produced mechanically and used as the aggregate for a particleboard.

Particleboard means a composite panel composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

Plywood means a panel product consisting of layers of wood veneers hot pressed together with resin. Plywood includes panel products made by hot pressing (with resin) veneers to a substrate such as particleboard, medium density fiberboard, or lumber. Plywood products may be flat or curved.

Plywood and composite wood products (PCWP) manufacturing facility means a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a panel, engineered wood product, or other product defined in §63.2292. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, molded particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

Press predryer means a dryer used to reduce the moisture and elevate the temperature by applying heat to a wet-formed fiber mat before the mat enters a hot press. A *press predryer* is a process unit.

Pressurized refiner means a piece of equipment operated under pressure for preheating (usually by steaming) wood material and refining (rubbing or grinding) the wood material into fibers. Pressurized refiners are operated with continuous infeed and outfeed of wood material and maintain elevated internal pressures (*i.e.* , there is no pressure release) throughout the preheating and refining process. A *pressurized refiner* is a process unit.

Primary tube dryer means a single-stage tube dryer or the first stage of a multi-stage tube dryer. Tube dryer stages are separated by vents for removal of moist gases between stages (*e.g.* , a product cyclone at the end of a single-stage dryer or between the first and second stages of a multi-stage tube dryer). The first stage of a multi-stage tube

dryer is used to remove the majority of the moisture from the wood furnish (compared to the moisture reduction in subsequent stages of the tube dryer). Blow-lines used to apply resin are considered part of the primary tube dryer. A *primary tube dryer* is a process unit.

Process unit means equipment classified according to its function such as a blender, dryer, press, former, or board cooler.

Reconstituted wood product board cooler means a piece of equipment designed to reduce the temperature of a board by means of forced air or convection within a controlled time period after the board exits the reconstituted wood product press unloader. Board coolers include wicket and star type coolers commonly found at medium density fiberboard and particleboard plants. Board coolers do not include cooling sections of dryers (e.g. , veneer dryers or fiberboard mat dryers) or coolers integrated into or following hardboard bake ovens or humidifiers. A *reconstituted wood product board cooler* is a process unit.

Reconstituted wood product press means a press, including (if applicable) the press unloader, that presses a resinated mat of wood fibers, particles, or strands between hot platens or hot rollers to compact and set the mat into a panel by simultaneous application of heat and pressure. Reconstituted wood product presses are used in the manufacture of hardboard, medium density fiberboard, particleboard, and oriented strandboard. Extruders are not considered to be reconstituted wood product presses. A *reconstituted wood product press* is a process unit.

Representative operating conditions means operation of a process unit during performance testing under the conditions that the process unit will typically be operating in the future, including use of a representative range of materials (e.g. , wood material of a typical species mix and moisture content or typical resin formulation) and representative operating temperature range.

Resin means the synthetic adhesive (including glue) or natural binder, including additives, used to bond wood or other cellulosic materials together to produce plywood and composite wood products.

Responsible official means responsible official as defined in 40 CFR 70.2 and 40 CFR 71.2.

Rotary strand dryer means a rotary dryer operated by applying heat and used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *rotary strand dryer* is a process unit.

Secondary tube dryer means the second stage and subsequent stages following the primary stage of a multi-stage tube dryer. Secondary tube dryers, also referred to as relay dryers, operate at lower temperatures than the primary tube dryer they follow. Secondary tube dryers are used to remove only a small amount of the furnish moisture compared to the furnish moisture reduction across the primary tube dryer. A *secondary tube dryer* is a process unit.

Softwood means the wood of a coniferous tree. Examples of softwoods include, but are not limited to, Southern yellow pine, Douglas fir, and White spruce.

Softwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium, generally on rollers, belts, cables, or wire mesh. Softwood veneer dryers are used to dry veneer with greater than or equal to 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be softwood veneer dryers. A *softwood veneer dryer* is a process unit.

Startup means bringing equipment online and starting the production process.

Startup, initial means the first time equipment is put into operation. Initial startup does not include operation solely for testing equipment. Initial startup does not include subsequent startups (as defined in this section) following malfunction or shutdowns or following changes in product or between batch operations. Initial startup does not include startup of equipment that occurred when the source was an area source.

Startup, shutdown, and malfunction plan (SSMP) means a plan developed according to the provisions of §63.6(e)(3).

Strand means a long (with respect to thickness and width), flat wood piece specially cut from a log for use in oriented strandboard, laminated strand lumber, or other wood strand-based product.

Temporary total enclosure (TTE) means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source, as defined in Method 204 of 40 CFR part 51, appendix M.

Thermal oxidizer means a control system that combusts or oxidizes exhaust gas from a process unit. Thermal oxidizers include regenerative thermal oxidizers and combustion units.

Total hazardous air pollutant emissions means, for purposes of this subpart, the sum of the emissions of the following six compounds: acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde.

Tube dryer means a single-stage or multi-stage dryer operated by applying heat to reduce the moisture of wood fibers or particles as they are conveyed (usually pneumatically) through the dryer. Resin may or may not be applied to the wood material before it enters the tube dryer. Tube dryers do not include pneumatic fiber transport systems that use temperature and humidity conditioned pneumatic system supply air in order to prevent cooling of the wood fiber as it is moved through the process. A *tube dryer* is a process unit.

Veneer means thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.

Veneer redryer means a dryer heated by conventional means, such as direct wood-fired, direct-gas-fired, or steam heated, that is used to redry veneer that has been previously dried. Because the veneer dried in a veneer redryer has been previously dried, the inlet moisture content of the veneer entering the redryer is less than 25 percent (by weight, dry basis). Batch units used to redry veneer (such as redry cookers) are not considered to be veneer redryers. A *veneer redryer* is a process unit.

Wet control device means any equipment that uses water as a means of collecting an air pollutant. Wet control devices include scrubbers, wet electrostatic precipitators, and electrified filter beds. Wet control devices do not include biofilters or other equipment that destroys or degrades HAP.

Wet forming means the process of making a slurry of water, fiber, and additives into a mat of fibers to be compressed into a fiberboard or hardboard product.

Wood I-joists means a structural wood beam with an I-shaped cross section formed by bonding (with resin) wood or laminated veneer lumber flanges onto a web cut from a panel such as plywood or oriented strandboard.

Wood products enclosure means a permanently installed containment that was designed to meet the following physical design criteria:

- (1) Any natural draft opening shall be at least four equivalent opening diameters from each HAP-emitting point, except for where board enters and exits the enclosure, unless otherwise specified by the EPA Administrator.
- (2) The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling.
- (3) The average facial velocity of air through all natural draft openings shall be at least 3,600 meters per hour (200 feet per minute). The direction of airflow through all natural draft openings shall be into the enclosure.
- (4) All access doors and windows whose areas are not included in item 2 of this definition and are not included in the calculation of facial velocity in item 3 of this definition shall be closed during routine operation of the process.
- (5) The enclosure is designed and maintained to capture all emissions for discharge through a control device.

Work practice requirement 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 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

Table 1A to Subpart DDDD of Part 63—Production-Based Compliance Options

For the following process units . . .	You must meet the following production-based compliance option (total HAP ^a basis) . . .
(1) Fiberboard mat dryer heated zones (at new affected sources only)	0.022 lb/MSF 1/2&inch;.
(2) Green rotary dryers	0.058 lb/ODT.
(3) Hardboard ovens	0.022 lb/MSF 1/8&inch;.
(4) Press predryers (at new affected sources only)	0.037 lb/MSF 1/2&inch;.
(5) Pressurized refiners	0.039 lb/ODT.
(6) Primary tube dryers	0.26 lb/ODT.
(7) Reconstituted wood product board coolers (at new affected sources only)	0.014 lb/MSF 3/4&inch;.
(8) Reconstituted wood product presses	0.30 lb/MSF 3/4&inch;.
(9) Softwood veneer dryer heated zones	0.022 lb/MSF 3/8&inch;.
(10) Rotary strand dryers	0.18 lb/ODT.
(11) Secondary tube dryers	0.010 lb/ODT.

^aTotal HAP, as defined in §63.2292, includes acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. lb/ODT = pounds per oven-dried ton; lb/MSF = pounds per thousand square feet with a specified thickness basis (inches). Section 63.2262(j) shows how to convert from one thickness basis to another.

Note: There is no production-based compliance option for conveyor strand dryers.

Table 1B to Subpart DDDD of Part 63—Add-on Control Systems Compliance Options

For each of the following process units . . .	You must comply with one of the following six compliance options by using an emissions control system . . .
Fiberboard mat dryer heated zones (at new affected sources only); green rotary dryers; hardboard ovens; press predryers (at new affected sources only); pressurized refiners; primary tube dryers; secondary tube dryers; reconstituted wood product board coolers (at new affected sources only); reconstituted wood product presses; softwood veneer dryer heated zones; rotary strand dryers; conveyor strand dryer zone one (at existing affected sources); and conveyor strand dryer zones one and two (at new affected sources)	(1) Reduce emissions of total HAP, measured as THC (as carbon) ^a , by 90 percent; or (2) Limit emissions of total HAP, measured as THC (as carbon) ^a , to 20 ppmvd; or (3) Reduce methanol emissions by 90 percent; or (4) Limit methanol emissions to less than or equal to 1 ppmvd if uncontrolled methanol emissions entering the control device are greater than or equal to 10 ppmvd; or (5) Reduce formaldehyde emissions by 90 percent; or (6) Limit formaldehyde emissions to less than or equal to 1 ppmvd if uncontrolled formaldehyde emissions entering the control device are greater than or equal to 10 ppmvd.

^aYou may choose to subtract methane from THC as carbon measurements.

Table 2 to Subpart DDDD of Part 63—Operating Requirements

If you operate a(n) . . .	You must . . .	Or you must . . .
(1) Thermal oxidizer	Maintain the 3-hour block average firebox temperature above the minimum temperature established during the performance test	Maintain the 3-hour block average THC concentration ^a in the thermal oxidizer exhaust below the maximum concentration established during the performance test.
(2) Catalytic oxidizer	Maintain the 3-hour block average catalytic oxidizer temperature above the minimum temperature established during the performance test; AND check the activity level of a representative sample of the catalyst at least every 12 months	Maintain the 3-hour block average THC concentration ^a in the catalytic oxidizer exhaust below the maximum concentration established during the performance test.
(3) Biofilter	Maintain the 24-hour block biofilter bed temperature within the range established according to §63.2262(m)	Maintain the 24-hour block average THC concentration ^a in the biofilter exhaust below the maximum concentration established during the performance test.

If you operate a(n) . . .	You must . . .	Or you must . . .
(4) Control device other than a thermal oxidizer, catalytic oxidizer, or biofilter	Petition the EPA Administrator for site-specific operating parameter(s) to be established during the performance test and maintain the average operating parameter(s) within the range(s) established during the performance test	Maintain the 3-hour block average THC concentration ^a in the control device exhaust below the maximum concentration established during the performance test.
(5) Process unit that meets a compliance option in Table 1A of this subpart, or a process unit that generates debits in an emissions average without the use of a control device	Maintain on a daily basis the process unit controlling operating parameter(s) within the ranges established during the performance test according to §63.2262(n)	Maintain the 3-hour block average THC concentration ^a in the process unit exhaust below the maximum concentration established during the performance test.

^aYou may choose to subtract methane from THC measurements.

Table 3 to Subpart DDDD of Part 63—Work Practice Requirements

For the following process units at existing or new affected sources . . .	You must . . .
(1) Dry rotary dryers	Process furnish with a 24-hour block average inlet moisture content of less than or equal to 30 percent (by weight, dry basis); AND operate with a 24-hour block average inlet dryer temperature of less than or equal to 600 °F.
(2) Hardwood veneer dryers	Process less than 30 volume percent softwood species on an annual basis.
(3) Softwood veneer dryers	Minimize fugitive emissions from the dryer doors through (proper maintenance procedures) and the green end of the dryers (through proper balancing of the heated zone exhausts).
(4) Veneer redryers	Process veneer that has been previously dried, such that the 24-hour block average inlet moisture content of the veneer is less than or equal to 25 percent (by weight, dry basis).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292.

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

For . . .	You must . . .	Using . . .
(1) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	select sampling port's location and the number of traverse ports	Method 1 or 1A of 40 CFR part 60, appendix A (as appropriate).
(2) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	determine velocity and volumetric flow rate	Method 2 in addition to Method 2A, 2C, 2D, 2F, or 2G in appendix A to 40 CFR part 60 (as appropriate).
(3) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	conduct gas molecular weight analysis	Method 3, 3A, or 3B in appendix A to 40 CFR part 60 (as appropriate).
(4) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	measure moisture content of the stack gas	Method 4 in appendix A to 40 CFR part 60; OR Method 320 in appendix A to 40 CFR part 63; OR ASTM D6348–03 (IBR, see §63.14(b)).
(5) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a total HAP as THC compliance option	measure emissions of total HAP as THC	Method 25A in appendix A to 40 CFR part 60. You may measure emissions of methane using EPA Method 18 in appendix A to 40 CFR part 60 and subtract the methane emissions from the emissions of total HAP as THC.
(6) each process unit subject to a compliance option in table 1A to this subpart; OR for each process unit used in calculation of an emissions average under §63.2240(c)	measure emissions of total HAP (as defined in §63.2292)	Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method IM/CAN/WP–99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP–A105.01 (IBR, see §63.14(f)); OR ASTM D6348–03 (IBR, see §63.14(b)) provided that percent R as determined in Annex A5 of ASTM D6348–03 is equal or greater than 70 percent and less than or equal to 130 percent.
(7) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a methanol compliance option	measure emissions of methanol	Method 308 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method CI/WP–98.01 (IBR, see §63.14(f)); OR the NCASI Method IM/CAN/WP–99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP–A105.01 (IBR, see §63.14(f)).

For . . .	You must . . .	Using . . .
(8) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a formaldehyde compliance option	measure emissions of formaldehyde	Method 316 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR Method 0011 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846) for formaldehyde; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14(f)); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)).
(9) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	meet the design specifications included in the definition of wood products enclosure in §63.2292; or determine the percent capture efficiency of the enclosure directing emissions to an add-on control device	Methods 204 and 204A through 204F of 40 CFR part 51, appendix M, to determine capture efficiency (except for wood products enclosures as defined in §63.2292). Enclosures that meet the definition of wood products enclosure or that meet Method 204 requirements for a permanent total enclosure (PTE) are assumed to have a capture efficiency of 100 percent. Enclosures that do not meet either the PTE requirements or design criteria for a wood products enclosure must determine the capture efficiency by constructing a TTE according to the requirements of Method 204 and applying Methods 204A through 204F (as appropriate). As an alternative to Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart.
(10) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1A to this subpart	determine the percent capture efficiency	a TTE and Methods 204 and 204A through 204F (as appropriate) of 40 CFR part 51, appendix M. As an alternative to installing a TTE and using Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart. Enclosures that meet the design criteria (1) through (4) in the definition of wood products enclosure, or that meet Method 204 requirements for a PTE (except for the criteria specified in section 6.2 of Method 204) are assumed to have a capture efficiency of 100 percent. Measured emissions divided by the capture efficiency provides the emission rate.
(11) each process unit subject to a compliance option in tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	establish the site-specific operating requirements (including the parameter limits or THC concentration limits) in table 2 to this subpart	data from the parameter monitoring system or THC CEMS and the applicable performance test method(s).

[71 FR 8373, Feb. 16, 2006]

Table 5 to Subpart DDDD of Part 63—Performance Testing and Initial Compliance Demonstrations for the Compliance Options and Operating Requirements

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(1) Process unit listed in Table 1A to this subpart	Meet the production-based compliance options listed in Table 1A to this subpart	The average total HAP emissions measured using the methods in Table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in Table 1A to this subpart; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(2) Process unit listed in Table 1B to this subpart	Reduce emissions of total HAP, measured as THC, by 90 percent	Total HAP emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in §63.2262; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.
(3) Process unit listed in Table 1B to this subpart	Limit emissions of total HAP, measured as THC, to 20 ppmvd	The average total HAP emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, do not exceed 20 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed 20 ppmvd.
(4) Process unit listed in Table 1B to this subpart	Reduce methanol or formaldehyde emissions by 90 percent	The methanol or formaldehyde emissions measured using the methods in Table 4 to this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in §63.2262; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(5) Process unit listed in Table 1B to this subpart	Limit methanol or formaldehyde emissions to less than or equal to 1 ppmvd (if uncontrolled emissions are greater than or equal to 10 ppmvd)	The average methanol or formaldehyde emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, do not exceed 1 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed 1 ppmvd. If the process unit is a reconstituted wood product press or a reconstituted wood product board cooler, your capture device either meets the EPA Method 204 criteria for a PTE or achieves a capture efficiency of greater than or equal to 95 percent.
(6) Reconstituted wood product press at a new or existing affected source, or reconstituted wood product board cooler at a new affected source	Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	You submit the results of capture efficiency verification using the methods in Table 4 to this subpart with your Notification of Compliance Status.
(7) Process unit listed in Table 1B to this subpart controlled by routing exhaust to a combustion unit	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	You submit with your Notification of Compliance Status documentation showing that the process exhausts controlled enter into the flame zone of your combustion unit.
(8) Process unit listed in Table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	You submit with your Notification of Compliance Status your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.

Table 6 to Subpart DDDD of Part 63—Initial Compliance Demonstrations for Work Practice Requirements

For each . . .	For the following work practice requirements . . .	You have demonstrated initial compliance if . . .
(1) Dry rotary dryer	Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600 °F	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a “dry rotary dryer” AND you have a record of the inlet moisture content and inlet dryer temperature (as required in §63.2263).
(2) Hardwood veneer dryer	Process less than 30 volume percent softwood species	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a “hardwood veneer dryer” AND you have a record of the percentage of softwoods processed in the dryer (as required in §63.2264).
(3) Softwood veneer dryer	Minimize fugitive emissions from the dryer doors and the green end	You meet the work practice requirement AND you submit with the Notification of Compliance Status a copy of your plan for minimizing fugitive emissions from the veneer dryer heated zones (as required in §63.2265).
(4) Veneer redryers	Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis)	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer operates only as a redryer AND you have a record of the veneer inlet moisture content of the veneer processed in the redryer (as required in §63.2266).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that you are using non-HAP coatings AND you have a record showing that you are using non-HAP coatings.

Table 7 to Subpart DDDD of Part 63—Continuous Compliance With the Compliance Options and Operating Requirements

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(1) Each process unit listed in Table 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of operating parameters	Collecting and recording the operating parameter monitoring system data listed in Table 2 to this subpart for the process unit according to §63.2269(a) through (b) and §63.2270; AND reducing the operating parameter monitoring system data to the specified averages in units of the applicable requirement according to calculations in §63.2270; AND maintaining the average operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262.
(2) Each process unit listed in Tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 of this subpart based on THC CEMS data	Collecting and recording the THC monitoring data listed in Table 2 to this subpart for the process unit according to §63.2269(d); AND reducing the CEMS data to 3-hour block averages according to calculations in §63.2269(d); AND maintaining the 3-hour block average THC concentration in the exhaust gases less than or equal to the THC concentration established according to §63.2262.
(3) Each process unit using a biofilter	Compliance options in Tables 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Conducting a repeat performance test using the applicable method(s) specified in Table 4 to this subpart within 2 years following the previous performance test and within 180 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.
(4) Each process unit using a catalytic oxidizer	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Checking the activity level of a representative sample of the catalyst at least every 12 months and taking any necessary corrective action to ensure that the catalyst is performing within its design range.

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(5) Each process unit listed in Table 1A to this subpart, or each process unit without a control device used in calculation of an emissions averaging debit under §63.2240(c)	Compliance options in Table 1A to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of process unit controlling operating parameters	Collecting and recording on a daily basis process unit controlling operating parameter data; AND maintaining the operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262.
(6) Each Process unit listed in Table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Implementing your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.

Table 8 to Subpart DDDD of Part 63—Continuous Compliance With the Work Practice Requirements

For . . .	For the following work practice requirements . . .	You must demonstrate continuous compliance by . . .
(1) Dry rotary dryer	Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600 °F	Maintaining the 24-hour block average inlet furnish moisture content at less than or equal to 30 percent (by weight, dry basis) AND maintaining the 24-hour block average inlet dryer temperature at less than or equal to 600 °F; AND keeping records of the inlet temperature of furnish moisture content and inlet dryer temperature.
(2) Hardwood veneer dryer	Process less than 30 volume percent softwood species	Maintaining the volume percent softwood species processed below 30 percent AND keeping records of the volume percent softwood species processed.
(3) Softwood veneer dryer	Minimize fugitive emissions from the dryer doors and the green end	Following (and documenting that you are following) your plan for minimizing fugitive emissions.
(4) Veneer redryers	Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis)	Maintaining the 24-hour block average inlet moisture content of the veneer processed at or below of less than or 25 percent AND keeping records of the inlet moisture content of the veneer processed.
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292	Continuing to use non-HAP coatings AND keeping records showing that you are using non-HAP coatings.

Table 9 to Subpart DDDD of Part 63—Requirements for Reports

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
(1) Compliance report	The information in §63.2281(c) through (g)	Semiannually according to the requirements in §63.2281(b).
(2) immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP	(i) Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	(ii) The information in §63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.

Table 10 to Subpart DDDD of Part 63—Applicability of General Provisions to Subpart DDDD

Citation	Subject	Brief description	Applies to subpart DDDD
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes.
§63.2	Definitions	Definitions for part 63 standards	Yes.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities	Prohibited activities; compliance date; circumvention, fragmentation	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes.
§63.6(a)	Applicability	GP apply unless compliance extension; GP apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources that Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in subpart, which must be no later than 3 years after effective date; for section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources that Become Major	Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (e.g., 3 years)	Yes.
§63.6(d)	[Reserved]		
§63.6(e)(1)–(2)	Operation & Maintenance	Operate to minimize emissions at all times; correct malfunctions as soon as practicable; operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	Yes.
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan (SSMP)	Requirement for SSM and SSMP; content of SSMP	Yes.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	Yes.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)–(9)	Opacity/Visible Emission (VE) Standards	Requirements for opacity and visible emission standards	NA.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(i)(15)	[Reserved]		
§63.6(i)(16)	Compliance Extension	Compliance extension and Administrator's authority	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with rule	Yes.
§63.7(a)(1)–(2)	Performance Test Dates	Dates for conducting initial performance testing and other compliance demonstrations; must conduct 180 days after first subject to rule	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD
§63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Rescheduling	If have to reschedule performance test, must notify Administrator as soon as practicable	Yes.
§63.7(c)	Quality Assurance/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM	Yes.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to rule and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs for at least the time specified in the relevant standard; compliance is based on arithmetic mean of three runs; specifies conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the notification of compliance status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance specifications in appendix B of part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring with Flares	Requirements for flares in §63.11 apply	NA.

Citation	Subject	Brief description	Applies to subpart DDDD
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with and good air pollution control practices	Yes.
§63.8(c)(1)(i)	Operation and Maintenance of CMS	Must maintain and operate CMS in accordance with §63.6(e)(1)	Yes.
§63.8(c)(1)(ii)	Spare Parts for CMS	Must maintain spare parts for routine CMS repairs	Yes.
§63.8(c)(1)(iii)	SSMP for CMS	Must develop and implement SSMP for CMS	Yes.
§63.8(c)(2)–(3)	Monitoring System Installation	Must install to get representative emission of parameter measurements; must verify operational status before or at performance test	Yes.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	CMS must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	Yes.
§63.8(c)(5)	Continuous Opacity Monitoring System (COMS) Minimum Procedures	COMS minimum procedures	NA.
§63.8(c)(6)–(8)	CMS Requirements	Zero and high-level calibration check requirements; out-of-control periods	Yes.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years. Keep old versions for 5 years after revisions	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that can't be used in average; rounding of data	Yes.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(2)	Initial Notifications	Submit notification 120 days after effective date; contents of notification	Yes.
§63.9(b)(3)	[Reserved]		
§63.9(b)(4)–(5)	Initial Notifications	Submit notification 120 days after effective date; notification of intent to construct/reconstruct; notification of commencement of construct/reconstruct; notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology/lowest achievable emission rate	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify EPA Administrator 60 days prior	Yes.
§63.9(f)	Notification of Visible Emissions/Opacity Test	Notify EPA Administrator 30 days prior	No.
§63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy	Yes.
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General Requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)–(iv)	Records Related to Startup, Shutdown, and Malfunction	Occurrence of each of operation (process equipment); occurrence of each malfunction of air pollution equipment; maintenance on air pollution control equipment; actions during startup, shutdown, and malfunction	Yes.
§63.10(b)(2)(vi) and (x)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control	Yes.
§63.10(b)(2)(vii)–(ix)	Records	Measurements to demonstrate compliance with compliance options and operating requirements; performance test, performance evaluation, and visible emission observation results; measurements to determine conditions of performance tests and performance evaluations	Yes.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting initial notification and notification of compliance status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)(1)–(6), (9)–(15)	Records	Additional records for CMS	Yes.
§63.10(c)(7)–(8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	NA.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.

Citation	Subject	Brief description	Applies to subpart DDDD
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Contents and submission	Yes.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEM on a unit; written copy of performance evaluation; 3 copies of COMS performance evaluation	Yes.
§63.10(e)(3)	Reports	Excess emission reports	No.
§63.10(e)(4)	Reporting COMS data	Must submit COMS data with performance test data	NA.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for EPA Administrator to waive	Yes.
§63.11	Flares	Requirements for flares	NA.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are send	Yes.
§63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

Appendix A to Subpart DDDD of Part 63—Alternative Procedure To Determine Capture Efficiency From Enclosures Around Hot Presses in the Plywood and Composite Wood Products Industry Using Sulfur Hexafluoride Tracer Gas

1.0 Scope and Application

This procedure has been developed specifically for the rule for the plywood and composite wood products (PCWP) industry and is used to determine the capture efficiency of a partial hot press enclosure in that industry. This procedure is applicable for the determination of capture efficiency for enclosures around hot presses and is an alternative to the construction of temporary total enclosures (TTE). Sulfur hexafluoride (SF₆) is used as a tracer gas (other tracer gases may be used if approved by the EPA Administrator). This gas is not indigenous to the ambient atmosphere and is nonreactive.

This procedure uses infrared spectrometry (IR) as the analytical technique. When the infrared spectrometer used is a Fourier-Transform Infrared spectrometer (FTIR), an alternate instrument calibration procedure may be used; the alternate calibration procedure is the calibration transfer standard (CTS) procedure of EPA Method 320 (appendix A to 40 CFR part 63). Other analytical techniques which are capable of equivalent Method Performance (Section 13.0) also may be used. Specifically, gas chromatography with electron capture detection (GC/ECD) is an applicable technique for analysis of SF₆.

2.0 Summary of Method

A constant mass flow rate of SF₆ tracer gas is released through manifolds at multiple locations within the enclosure to mimic the release of hazardous air pollutants during the press process. This test method requires a minimum of three SF₆ injection points (two at the press unloader and one at the press) and provides details about considerations for locating the injection points. A GC/ECD is used to measure the concentration of SF₆ at the inlet duct to the control device (outlet duct from enclosure). Simultaneously, EPA Method 2 (appendix A to 40 CFR part 60) is used to measure the flow rate at the inlet duct to the control device. The concentration and flow rate measurements are used

to calculate the mass emission rate of SF₆ at the control device inlet. Through calculation of the mass of SF₆ released through the manifolds and the mass of SF₆ measured at the inlet to the control device, the capture efficiency of the enclosure is calculated.

In addition, optional samples of the ambient air may be taken at locations around the perimeter of the enclosure to quantify the ambient concentration of SF₆ and to identify those areas of the enclosure that may be performing less efficiently; these samples would be taken using disposable syringes and would be analyzed using a GC/ECD.

Finally, in addition to the requirements specified in this procedure, the data quality objectives (DQO) or lower confidence limit (LCL) criteria specified in appendix A to 40 CFR part 63, subpart KK, Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods, must also be satisfied. A minimum of three test runs are required for this procedure; however, additional test runs may be required based on the results of the DQO or LCL analysis.

3.0 Definitions

3.1 Capture efficiency (CE). The weight per unit time of SF₆ entering the control device divided by the weight per unit time of SF₆ released through manifolds at multiple locations within the enclosure.

3.2 Control device (CD). The equipment used to reduce, by destruction or removal, press exhaust air pollutants prior to discharge to the ambient air.

3.3 Control/destruction efficiency (DE). The volatile organic compound or HAP removal efficiency of the control device.

3.4 Data Quality Objective (DQO) Approach. A statistical procedure to determine the precision of the data from a test series and to qualify the data in the determination of capture efficiency for compliance purposes. If the results of the DQO analysis of the initial three test runs do not satisfy the DQO criterion, the LCL approach can be used or additional test runs must be conducted. If additional test runs are conducted, then the DQO or LCL analysis is conducted using the data from both the initial test runs and all additional test runs.

3.5 Lower Confidence Limit (LCL) Approach. An alternative statistical procedure that can be used to qualify data in the determination of capture efficiency for compliance purposes. If the results of the LCL approach produce a CE that is too low for demonstrating compliance, then additional test runs must be conducted until the LCL or DQO is met. As with the DQO, data from all valid test runs must be used in the calculation.

3.6 Minimum Measurement Level (MML). The minimum tracer gas concentration expected to be measured during the test series. This value is selected by the tester based on the capabilities of the IR spectrometer (or GC/ECD) and the other known or measured parameters of the hot press enclosure to be tested. The selected MML must be above the low-level calibration standard and preferably below the mid-level calibration standard.

3.7 Method 204. The U.S. EPA Method 204, "Criteria For and Verification of a Permanent or Temporary Total Enclosure" (40 CFR part 51, appendix M).

3.8 Method 205. The U.S. EPA Method 205, "Verification of Gas Dilution Systems for Field Instrument Calibrations" (40 CFR part 51, appendix M).

3.9 Method 320. The U.S. EPA Method 320, "Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy" (40 CFR part 63, appendix A).

3.10 Overall capture and control efficiency (CCE). The collection and control/destruction efficiency of both the PPE and CD combined. The CCE is calculated as the product of the CE and DE.

3.11 Partial press enclosure (PPE). The physical barrier that "partially" encloses the press equipment, captures a significant amount of the associated emissions, and transports those emissions to the CD.

3.12 Test series. A minimum of three test runs or, when more than three runs are conducted, all of the test runs conducted.

4.0 Interferences

There are no known interferences.

5.0 Safety

Sulfur hexafluoride is a colorless, odorless, nonflammable liquefied gas. It is stable and nonreactive and, because it is noncorrosive, most structural materials are compatible with it. The Occupational Safety and Health Administration Permissible Emission Limit-Time Weighted Average (PEL-TWA) and Threshold Limit Value-Time Weighted Average (TLV-TWA) concentrations are 1,000 parts per million. Sulfur hexafluoride is an asphyxiant. Exposure to an oxygen-deficient atmosphere (less than 19.5 percent oxygen) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness, and death. Exposure to atmospheres containing less than 12 percent oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help themselves. Contact with liquid or cold vapor may cause frostbite. Avoid breathing sulfur hexafluoride gas. Self-contained breathing apparatus may be required by rescue workers. Sulfur hexafluoride is not listed as a carcinogen or a potential carcinogen.

6.0 Equipment and Supplies

This method requires equipment and supplies for: (a) the injection of tracer gas into the enclosure, (b) the measurement of the tracer gas concentration in the exhaust gas entering the control device, and (c) the measurement of the volumetric flow rate of the exhaust gas entering the control device. In addition, the requisite equipment needed for EPA Methods 1–4 in appendix A to 40 CFR part 60 will be required. Equipment and supplies for optional ambient air sampling are discussed in Section 8.6.

6.1 Tracer Gas Injection.

6.1.1 Manifolds. This method requires the use of tracer gas supply cylinder(s) along with the appropriate flow control elements. Figure 1 shows a schematic drawing of the injection system showing potential locations for the tracer gas manifolds. Figure 2 shows a schematic drawing of the recommended configuration of the injection manifold. Three tracer gas discharge manifolds are required at a minimum.

6.1.2 Flow Control Meter. Flow control and measurement meter for measuring the quantity of tracer gas injected. A mass flow, volumetric flow, or critical orifice control meter can be used for this method. The meter must be accurate to within ± 5 percent at the flow rate used. This means that the flow meter must be calibrated against a primary standard for flow measurement at the appropriate flow rate.

6.2 Measurement of Tracer Gas Concentration.

6.2.1 Sampling Probes. Use Pyrex or stainless steel sampling probes of sufficient length to reach the traverse points calculated according to EPA Method 1 (appendix A to 40 CFR part 60).

6.2.2 Sampling Line. Use a heated Teflon sampling line to transport the sample to the analytical instrument.

6.2.3 Sampling Pump. Use a sampling pump capable of extracting sufficient sample from the duct and transporting to the analytical instrument.

6.2.4 Sample Conditioning System. Use a particulate filter sufficient to protect the sampling pump and analytical instrument. At the discretion of the tester and depending on the equipment used and the moisture content of the exhaust gas, it may be necessary to further condition the sample by removing moisture using a condenser.

6.2.5 Analytical Instrument. Use one of the following analytical instruments.

6.2.5.1 Spectrometer. Use an infrared spectrometer designed to measuring SF₆ tracer gas and capable of meeting or exceeding the specifications of this procedure. An FTIR meeting the specifications of Method 320 in appendix A to 40 CFR part 63 may be used.

6.2.5.2 GC/ECD. Use a GC/ECD designed to measure SF₆ tracer gas and capable of meeting or exceeding the specifications of this procedure.

6.2.6 Recorder. At a minimum, use a recorder with linear strip chart. An automated data acquisition system (DAS) is recommended.

6.3 Exhaust Gas Flow Rate Measurement. Use equipment specified for EPA Methods 2, 3, and 4 in appendix A to 40 CFR part 60 for measuring flow rate of exhaust gas at the inlet to the control device.

7.0 Reagents and Standards

7.1 Tracer Gas. Use SF₆ as the tracer gas. The manufacturer of the SF₆ tracer gas should provide a recommended shelf life for the tracer gas cylinder over which the concentration does not change more than ±2 percent from the certified value. A gas mixture of SF₆ diluted with nitrogen should be used; based on experience and calculations, pure SF₆ gas is not necessary to conduct tracer gas testing. Select a concentration and flow rate that is appropriate for the analytical instrument's detection limit, the MML, and the exhaust gas flow rate from the enclosure (see section 8.1.1). You may use a tracer gas other than SF₆ with the prior approval of the EPA Administrator. If you use an approved tracer gas other than SF₆, all references to SF₆ in this protocol instead refer to the approved tracer gas.

7.2 Calibration Gases. The SF₆ calibration gases required will be dependent on the selected MML and the appropriate span selected for the test. Commercial cylinder gases certified by the manufacturer to be accurate to within 1 percent of the certified label value are preferable, although cylinder gases certified by the manufacturer to 2 percent accuracy are allowed. Additionally, the manufacturer of the SF₆ calibration gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. Another option allowed by this method is for the tester to obtain high concentration certified cylinder gases and then use a dilution system meeting the requirements of EPA Method 205, 40 CFR part 51, appendix M, to make multi-level calibration gas standards. Low-level, mid-level, and high-level calibration gases will be required. The MML must be above the low-level standard, the high-level standard must be no more than four times the low-level standard, and the mid-level standard must be approximately halfway between the high- and low-level standards. See section 12.1 for an example calculation of this procedure.

Note: If using an FTIR as the analytical instrument, the tester has the option of following the CTS procedures of Method 320 in appendix A to 40 CFR part 63; the calibration standards (and procedures) specified in Method 320 may be used in lieu of the calibration standards and procedures in this protocol.

7.2.1 Zero Gas. High purity nitrogen.

7.2.2 Low-Level Calibration Gas. An SF₆ calibration gas in nitrogen with a concentration equivalent to 20 to 30 percent of the applicable span value.

7.2.3 Mid-Level Calibration Gas. An SF₆ calibration gas in nitrogen with a concentration equivalent to 45 to 55 percent of the applicable span value.

7.2.4 High-Level Calibration Gas. An SF₆ calibration gas in nitrogen with a concentration equivalent to 80 to 90 percent of the applicable span value.

8.0 Sample Collection, Preservation, Storage, and Transport

8.1 Test Design.

8.1.1 Determination of Minimum Tracer Gas Flow Rate.

8.1.1.1 Determine (via design calculations or measurements) the approximate flow rate of the exhaust gas through the enclosure, actual cubic feet per minute (acfm).

8.1.1.2 Calculate the minimum tracer gas injection rate necessary to assure a detectable SF₆ concentration at the exhaust gas measurement point (see section 12.1 for calculation).

8.1.1.3 Select a flow meter for the injection system with an operating range appropriate for the injection rate selected.

8.1.2 Determination of the Approximate Time to Reach Equilibrium.

8.1.2.1 Determine the volume of the enclosure.

8.1.2.2 Calculate the air changes per minute of the enclosure by dividing the approximate exhaust flow rate (8.1.1.1 above) by the enclosed volume (8.1.2.1 above).

8.1.2.3 Calculate the time at which the tracer concentration in the enclosure will achieve approximate equilibrium. Divide 3 by the air changes per minute (8.1.2.2 above) to establish this time. This is the approximate length of time for the system to come to equilibrium. Concentration equilibrium occurs when the tracer concentration in the enclosure stops changing as a function of time for a constant tracer release rate. Because the press is continuously cycling, equilibrium may be exhibited by a repeating, but stable, cyclic pattern rather than a single constant concentration value. Assure sufficient tracer gas is available to allow the system to come to equilibrium, and to sample for a minimum of 20 minutes and repeat the procedure for a minimum of three test runs. Additional test runs may be required based on the results of the DQO and LCL analyses described in 40 CFR part 63, subpart KK, appendix A.

8.1.3 Location of Injection Points. This method requires a minimum of three tracer gas injection points. The injection points should be located within leak prone, volatile organic compound/hazardous air pollutant (VOC/HAP) producing areas around the press, or horizontally within 12 inches of the defined equipment. One potential configuration of the injection points is depicted in Figure 1. The effect of wind, exfiltration through the building envelope, and air flowing through open building doors should be considered when locating tracer gas injection points within the enclosure. The injection points should also be located at a vertical elevation equal to the VOC/HAP generating zones. The injection points should not be located beneath obstructions that would prevent a natural dispersion of the gas. Document the selected injection points in a drawing(s).

8.1.4 Location of Flow Measurement and Tracer Sampling. Accurate CD inlet gas flow rate measurements are critical to the success of this procedure. Select a measurement location meeting the criteria of EPA Method 1 (40 CFR part 60, appendix A), Sampling and Velocity Traverses for Stationary Sources. Also, when selecting the measurement location, consider whether stratification of the tracer gas is likely at the location (e.g. , do not select a location immediately after a point of air in-leakage to the duct).

8.2 Tracer Gas Release. Release the tracer gas at a calculated flow rate (see section 12.1 for calculation) through a minimum of three injection manifolds located as described above in 8.1.3. The tracer gas delivery lines must be routed into the enclosure and attached to the manifolds without violating the integrity of the enclosure.

8.3 Pretest Measurements.

8.3.1 Location of Sampling Point(s). If stratification is not suspected at the measurement location, select a single sample point located at the centroid of the CD inlet duct or at a point no closer to the CD inlet duct walls than 1 meter. If stratification is suspected, establish a "measurement line" that passes through the centroidal area and in the direction of any expected stratification. Locate three traverse points at 16.7, 50.0 and 83.3 percent of the measurement line and sample from each of these three points during each run, or follow the procedure in section 8.3.2 to verify whether stratification does or does not exist.

8.3.2 Stratification Verification. The presence or absence of stratification can be verified by using the following procedure. While the facility is operating normally, initiate tracer gas release into the enclosure. For rectangular ducts, locate at least nine sample points in the cross section such that the sample points are the centroids of similarly-shaped, equal area divisions of the cross section. Measure the tracer gas concentration at each point. Calculate the

mean value for all sample points. For circular ducts, conduct a 12-point traverse (*i.e.* , six points on each of the two perpendicular diameters) locating the sample points as described in 40 CFR part 60, appendix A, Method 1. Perform the measurements and calculations as described above. Determine if the mean pollutant concentration is more than 10 percent different from any single point. If so, the cross section is considered to be stratified, and the tester may not use a single sample point location, but must use the three traverse points at 16.7, 50.0, and 83.3 percent of the entire measurement line. Other traverse points may be selected, provided that they can be shown to the satisfaction of the Administrator to provide a representative sample over the stack or duct cross section.

8.4 CD Inlet Gas Flow Rate Measurements. The procedures of EPA Methods 1–4 (40 CFR part 60, appendix A) are used to determine the CD inlet gas flow rate. Molecular weight (Method 3) and moisture (Method 4) determinations are only required once for each test series. However, if the test series is not completed within 24 hours, then the molecular weight and moisture measurements should be repeated daily. As a minimum, velocity measurements are conducted according to the procedures of Methods 1 and 2 before and after each test run, as close to the start and end of the run as practicable. A velocity measurement between two runs satisfies both the criterion of “after” the run just completed and “before” the run to be initiated. Accurate exhaust gas flow rate measurements are critical to the success of this procedure. If significant temporal variations of flow rate are anticipated during the test run under normal process operating conditions, take appropriate steps to accurately measure the flow rate during the test. Examples of steps that might be taken include: (1) conducting additional velocity traverses during the test run; or (2) continuously monitoring a single point of average velocity during the run and using these data, in conjunction with the pre- and post-test traverses, to calculate an average velocity for the test run.

8.5 Tracer Gas Measurement Procedure.

8.5.1 Calibration Error Test. Immediately prior to the emission test (within 2 hours of the start of the test), introduce zero gas and high-level calibration gas at the calibration valve assembly. Zero and calibrate the analyzer according to the manufacturer's procedures using, respectively, nitrogen and the calibration gases. Calculate the predicted response for the low-level and mid-level gases based on a linear response line between the zero and high-level response. Then introduce the low-level and mid-level calibration gases successively to the measurement system. Record the analyzer responses for the low-level and mid-level calibration gases and determine the differences between the measurement system responses and the predicted responses using the equation in section 12.3. These differences must be less than 5 percent of the respective calibration gas value. If not, the measurement system must be replaced or repaired prior to testing. No adjustments to the measurement system shall be conducted after the calibration and before the drift determination (section 8.5.4). If adjustments are necessary before the completion of the test series, perform the drift checks prior to the required adjustments and repeat the calibration following the adjustments. If multiple electronic ranges are to be used, each additional range must be checked with a mid-level calibration gas to verify the multiplication factor.

Note: If using an FTIR for the analytical instrument, you may choose to follow the pretest preparation, evaluation, and calibration procedures of Method 320 (section 8.0) (40 CFR part 63, appendix A) in lieu of the above procedure.

8.5.2 Response Time Test. Conduct this test once prior to each test series. Introduce zero gas into the measurement system at the calibration valve assembly. When the system output has stabilized, switch quickly to the high-level calibration gas. Record the time from the concentration change to the measurement system response equivalent to 95 percent of the step change. Repeat the test three times and average the results.

8.5.3 SF₆ Measurement. Sampling of the enclosure exhaust gas at the inlet to the CD should begin at the onset of tracer gas release. If necessary, adjust the tracer gas injection rate such that the measured tracer gas concentration at the CD inlet is within the spectrometer's calibration range (*i.e.* , between the MML and the span value). Once the tracer gas concentration reaches equilibrium, the SF₆ concentration should be measured using the infrared spectrometer continuously for at least 20 minutes per run. Continuously record (*i.e.* , record at least once per minute) the concentration. Conduct at least three test runs. On the recording chart, in the data acquisition system, or in a log book, make a note of periods of process interruption or cyclic operation such as the cycles of the hot press operation. Table 1 to this appendix summarizes the physical measurements required for the enclosure testing.

Note: If a GC/ECD is used as the analytical instrument, a continuous record (at least once per minute) likely will not be possible; make a minimum of five injections during each test run. Also, the minimum test run duration criterion of 20 minutes applies.

8.5.4 Drift Determination. Immediately following the completion of the test run, reintroduce the zero and mid-level calibration gases, one at a time, to the measurement system at the calibration valve assembly. (Make no adjustments to the measurement system until both the zero and calibration drift checks are made.) Record the analyzer responses for the zero and mid-level calibration gases and determine the difference between the instrument responses for each gas prior to and after the emission test run using the equation in section 12.4. If the drift values exceed the specified limits (section 13), invalidate the test results preceding the check and repeat the test following corrections to the measurement system. Alternatively, recalibrate the test measurement system as in section 8.5.1 and report the results using both sets of calibration data (*i.e.* , data determined prior to the test period and data determined following the test period). Note: If using an FTIR for the analytical instrument, you may choose to follow the post-test calibration procedures of Method 320 in appendix A to 40 CFR part 63 (section 8.11.2) in lieu of the above procedures.

8.6 Ambient Air Sampling (Optional). Sampling the ambient air surrounding the enclosure is optional. However, taking these samples during the capture efficiency testing will identify those areas of the enclosure that may be performing less efficiently.

8.6.1 Location of Ambient Samples Outside the Enclosure (Optional). In selecting the sampling locations for collecting samples of the ambient air surrounding the enclosure, consider potential leak points, the direction of the release, and laminar flow characteristics in the area surrounding the enclosure. Samples should be collected from all sides of the enclosure, downstream in the prevailing room air flow, and in the operating personnel occupancy areas.

8.6.2 Collection of Ambient Samples (Optional). During the tracer gas release, collect ambient samples from the area surrounding the enclosure perimeter at predetermined location using disposable syringes or some other type of containers that are non-absorbent, inert, and that have low permeability (*i.e.* , polyvinyl fluoride film or polyester film sample bags or polyethylene, polypropylene, nylon or glass bottles). The use of disposable syringes allows samples to be injected directly into a gas chromatograph. Concentration measurements taken around the perimeter of the enclosure provide evidence of capture performance and will assist in the identification of those areas of the enclosure that are performing less efficiently.

8.6.3 Analysis and Storage of Ambient Samples (Optional). Analyze the ambient samples using an analytical instrument calibrated and operated according to the procedures in this appendix or ASTM E 260 and ASTM E 697. Samples may be analyzed immediately after a sample is taken, or they may be stored for future analysis. Experience has shown no degradation of concentration in polypropylene syringes when stored for several months as long as the needle or syringe is plugged. Polypropylene syringes should be discarded after one use to eliminate the possibility of cross contamination of samples.

9.0 Quality Control

9.1 Sampling, System Leak Check. A sampling system leak check should be conducted prior to and after each test run to ensure the integrity of the sampling system.

9.2 Zero and Calibration Drift Tests.

Section	Quality control measure	Effect
8.5.4	Zero and calibration drift tests	Ensures that bias introduced by drift in the measurement system output during the run is no greater than 3 percent of span.

10.0 Calibration and Standardization

10.1 Control Device Inlet Air Flow Rate Measurement Equipment. Follow the equipment calibration requirements specified in Methods 2, 3, and 4 (appendix A to 40 CFR part 60) for measuring the velocity, molecular weight, and moisture of the control device inlet air.

10.2 Tracer Gas Injection Rate. A dry gas volume flow meter, mass flow meter, or orifice can be used to measure the tracer gas injection flow rate. The selected flow measurement device must have an accuracy of greater than ± 5

percent at the field operating range. Prior to the test, verify the calibration of the selected flow measurement device using either a wet test meter, spirometer, or liquid displacement meter as the calibration device. Select a minimum of two flow rates to bracket the expected field operating range of the flow meter. Conduct three calibration runs at each of the two selected flow rates. For each run, note the exact quantity of gas as determined by the calibration standard and the gas volume indicated by the flow meter. For each flow rate, calculate the average percent difference of the indicated flow compared to the calibration standard.

10.3 Spectrometer. Follow the calibration requirements specified by the equipment manufacturer for infrared spectrometer measurements and conduct the pretest calibration error test specified in section 8.5.1. Note: if using an FTIR analytical instrument see Method 320, section 10 (appendix A to 40 CFR part 63).

10.4 Gas Chromatograph. Follow the pre-test calibration requirements specified in section 8.5.1.

10.5 Gas Chromatograph for Ambient Sampling (Optional). For the optional ambient sampling, follow the calibration requirements specified in section 8.5.1 or ASTM E 260 and E 697 and by the equipment manufacturer for gas chromatograph measurements.

11.0 Analytical Procedures

The sample collection and analysis are concurrent for this method (see section 8.0).

12.0 Calculations and Data Analysis

12.1 Estimate MML and Span. The MML is the minimum measurement level. The selection of this level is at the discretion of the tester. However, the MML must be higher than the low-level calibration standard, and the tester must be able to measure at this level with a precision of ≤ 10 percent. As an example, select the MML as 10 times the instrument's published detection limit. The detection limit of one instrument is 0.01 parts per million by volume (ppmv). Therefore, the MML would be 0.10 ppmv. Select the low-level calibration standard as 0.08 ppmv. The high-level standard would be four times the low-level standard or 0.32 ppmv. A reasonable mid-level standard would then be 0.20 ppmv (halfway between the low-level standard and the high-level standard). Finally, the span value would be approximately 0.40 ppmv (the high-level value is 80 percent of the span). In this example, the following MML, calibration standards, and span values would apply:

MML = 0.10 ppmv

Low-level standard = 0.08 ppmv

Mid-level standard = 0.20 ppmv

High-level standard = 0.32 ppmv

Span value = 0.40 ppmv

12.2 Estimate Tracer Gas Injection Rate for the Given Span. To estimate the minimum and maximum tracer gas injection rate, assume a worst case capture efficiency of 80 percent, and calculate the tracer gas flow rate based on known or measured parameters. To estimate the minimum tracer gas injection rate, assume that the MML concentration (10 times the IR detection limit in this example) is desired at the measurement location. The following equation can be used to estimate the minimum tracer gas injection rate:

$$((QT-MIN \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = MML$$

$$QT-MIN = 1.25 \times MML \times (Q_E/C_T) \times 10^{-4}$$

Where:

QT-MIN= minimum volumetric flow rate of tracer gas injected, standard cubic feet per minute (scfm);

Q_E = volumetric flow rate of exhaust gas, scfm;

C_T = Tracer gas (SF_6) concentration in gas blend, percent by volume;

MML = minimum measured level, ppmv = $10 \times IR_{DL}$ (for this example);

IR_{DL} = IR detection limit, ppmv.

Standard conditions: 20 °C, 760 millimeters of mercury (mm Hg).

To estimate the maximum tracer gas injection rate, assume that the span value is desired at the measurement location. The following equation can be used to estimate the maximum tracer gas injection rate:

$$((QT-MAX \times 0.8) / Q_E) \times (C_T \div 100) \times 10^6 = \text{span value}$$

$$QT-MAX = 1.25 \times \text{span value} \times (Q_E / C_T) \times 10^{-4}$$

Where:

QT-MAX = maximum volumetric flow rate of tracer gas injected, scfm;

Span value = instrument span value, ppmv.

The following example illustrates this calculation procedure:

Find the range of volumetric flow rate of tracer gas to be injected when the following parameters are known:

Q_E = 60,000 scfm (typical exhaust gas flow rate from an enclosure);

C_T = 2 percent SF_6 in nitrogen;

IR_{DL} = 0.01 ppmv (per manufacturer's specifications);

MML = $10 \times IR_{DL}$ = 0.10 ppmv;

Span value = 0.40 ppmv;

Q_T = ?

Minimum tracer gas volumetric flow rate:

$$QT-MIN = 1.25 \times MML \times (Q_E / C_T) \times 10^{-4}$$

$$QT-MIN = 1.25 \times 0.10 \times (60,000 / 2) \times 10^{-4} = 0.375 \text{ scfm}$$

Maximum tracer gas volumetric flow rate:

$$QT-MAX = 1.25 \times \text{span value} \times (Q_E / C_T) \times 10^{-4}$$

$$QT-MAX = 1.25 \times 0.40 \times (60,000 / 2) \times 10^{-4} = 1.5 \text{ scfm}$$

In this example, the estimated total volumetric flow rate of the two percent SF_6 tracer gas injected through the manifolds in the enclosure lies between 0.375 and 1.5 scfm.

12.3 Calibration Error. Calculate the calibration error for the low-level and mid-level calibration gases using the following equation:

$$\text{Err} = \frac{|C_{\text{std}} - C_{\text{meas}}|}{C_{\text{std}}} \times 100$$

Where:

Err = calibration error, percent;

C_{std} = low-level or mid-level calibration gas value, ppmv;

C_{meas} = measured response to low-level or mid-level concentration gas, ppmv.

12.4 Calibration Drift. Calculate the calibration drift for the zero and low-level calibration gases using the following equation:

$$D = \frac{|C_{\text{initial}} - C_{\text{final}}|}{C_{\text{span}}} \times 100$$

Where:

D = calibration drift, percent;

C_{initial} = low-level or mid-level calibration gas value measured before test run, ppmv;

C_{final} = low-level or mid-level calibration gas value measured after test run, ppmv;

C_{span} = span value, ppmv.

12.5 Calculate Capture Efficiency. The equation to calculate enclosure capture efficiency is provided below:

$$\text{CE} = \left(\frac{\text{SF}_6\text{-CD}}{\text{SF}_6\text{-INJ}} \right) \times 100$$

Where:

CE = capture efficiency;

SF₆-CD = mass of SF₆ measured at the inlet to the CD;

SF₆-INJ = mass of SF₆ injected from the tracer source into the enclosure.

Calculate the CE for each of the initial three test runs. Then follow the procedures outlined in section 12.6 to calculate the overall capture efficiency.

12.6 Calculate Overall Capture Efficiency. After calculating the capture efficiency for each of the initial three test runs, follow the procedures in 40 CFR part 63, subpart KK, appendix A, to determine if the results of the testing can be used in determining compliance with the requirements of the rule. There are two methods that can be used: the DQO and LCL methods. The DQO method is described in section 3 of 40 CFR part 63, subpart KK, appendix A, and provides a measure of the precision of the capture efficiency testing conducted. Section 3 of 40 CFR part 63, subpart KK, appendix A, provides an example calculation using results from a facility. If the DQO criteria are met using the first set of three test runs, then the facility can use the average capture efficiency of these test results to determine the capture efficiency of the enclosure. If the DQO criteria are not met, then the facility can conduct another set of three runs and run the DQO analysis again using the results from the six runs *OR* the facility can elect to use the LCL approach.

The LCL method is described in section 4 of 40 CFR part 63, subpart KK, appendix A, and provides sources that may be performing much better than their regulatory requirement, a screening option by which they can demonstrate compliance. The LCL approach compares the 80 percent lower confidence limit for the mean measured CE value to the applicable regulatory requirement. If the LCL capture efficiency is higher than the applicable limit, then the facility is in initial compliance and would use the LCL capture efficiency as the capture efficiency to determine compliance. If the LCL capture efficiency is lower than the applicable limit, then the facility must perform additional test runs and re-run the DQO or LCL analysis.

13.0 Method Performance

13.1 Measurement System Performance Specifications.

13.1.1 Zero Drift. Less than ± 3 percent of the span value.

13.1.2 Calibration Drift. Less than ± 3 percent of the span value.

13.1.3 Calibration Error. Less than ± 5 percent of the calibration gas value.

13.2 Flow Measurement Specifications. The mass flow, volumetric flow, or critical orifice control meter used should have an accuracy of greater than ± 5 percent at the flow rate used.

13.3 Calibration and Tracer Gas Specifications. The manufacturer of the calibration and tracer gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ± 2 percent from the certified value.

14.0 Pollution Prevention [Reserved]

15.0 Waste Management [Reserved]

16.0 References

1. 40 CFR part 60, appendix A, EPA Method 1—Sample and velocity traverses for stationary sources.
2. 40 CFR part 60, appendix A, EPA Method 2—Determination of stack gas velocity and volumetric flow rate.
3. 40 CFR part 60, appendix A, EPA Method 3—Gas analysis for the determination of dry molecular weight.
4. 40 CFR part 60, appendix A, EPA Method 4—Determination of moisture content in stack gases.
5. SEMI F15–93 Test Method for Enclosures Using Sulfur Hexafluoride Tracer Gas and Gas Chromatography.
6. Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to EPA Regional Directors, Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions, February 7, 1995. (That memorandum contains an attached technical document from Candace Sorrell, Emission Monitoring and Analysis Division, "Guidelines for Determining Capture Efficiency," January 9, 1994).
7. Technical Systems Audit of Testing at Plant "C," EPA–454/R–00–26, May 2000.
8. Material Safety Data Sheet for SF₆Air Products and Chemicals, Inc. Website: www3.airproducts.com. October 2001.

17.0 Tables, Diagrams, Flowcharts, and Validation Data

Table 1 to Appendix A—Summary of Critical Physical Measurements for Enclosure Testing

Measurement	Measurement instrumentation	Measurement frequency	Measurement site
Tracer gas injection rate	Mass flow meter, volumetric flow meter or critical orifice	Continuous	Injection manifolds (cylinder gas).
Tracer gas concentration at control device inlet	Infrared Spectrometer or GC/ECD	Continuous (at least one reading per minute) for a minimum of 20 minutes	Inlet duct to the control device (outlet duct of enclosure).
Volumetric air flow rate	EPA Methods 1, 2, 3, 4 (40 CFR part 60, appendix A) • Velocity sensor (Manometer/Pitot tube) • Thermocouple	Each test run for velocity (minimum); Daily for moisture and molecular weight	Inlet duct to the control device (outlet duct of enclosure).
	• Midget Impinger sampler		
	• Orsat or Fyrite		

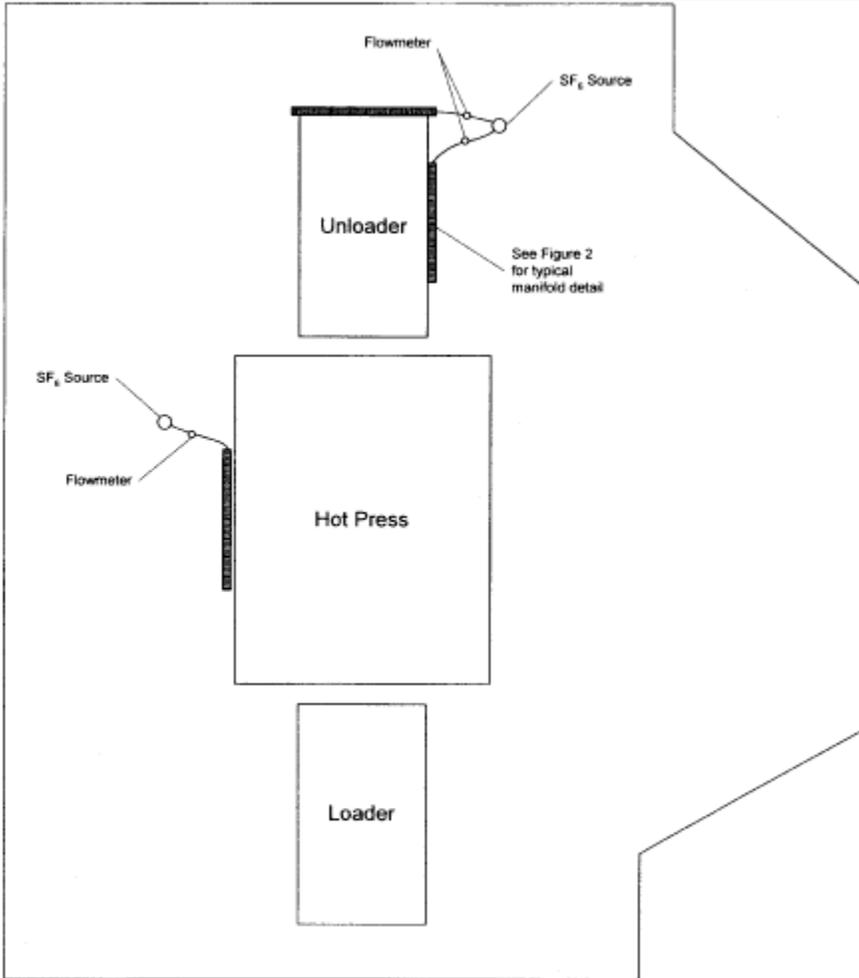


Figure 1. Plan view schematic of hot press and enclosure showing SF₆ manifold locations.

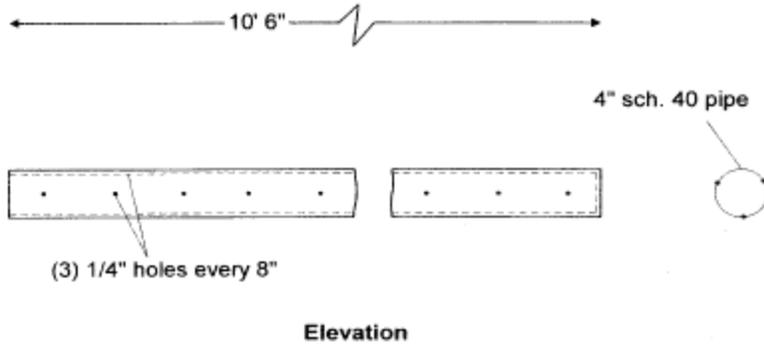


Figure 2. Schematic detail for manifold system for SF₆ injection.

Attachment C
to a Part 70 Operating Permit No. T039-34286-00014

[Downloaded from the eCFR on August 25, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

What This Subpart Covers

§60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

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

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

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

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

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

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

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

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

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

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

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

- (iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or
 - (iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).
- (5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.
- (6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.
- (b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.
- (c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.
- (d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.
- (e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.
- (f) Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

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

Emission Standards for Manufacturers

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

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

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

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine

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

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

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

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

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

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed stationary SI ICE.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59175, Oct. 8, 2008; 76 FR 37973, June 28, 2011; 78 FR 6697, Jan. 30, 2013]

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

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

Emission Standards for Owners and Operators

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

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

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

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

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

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

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

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

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

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

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

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

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

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

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

Other Requirements for Owners and Operators

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

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

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

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

(e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

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

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

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

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

Compliance Requirements for Manufacturers

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

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

[73 FR 59176, Oct. 8, 2008]

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

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

[73 FR 59176, Oct. 8, 2008]

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

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

[73 FR 59176, Oct. 8, 2008]

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

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

subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

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

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

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

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

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

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

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

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the

nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

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

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

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

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

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

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

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

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

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

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

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

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

Compliance Requirements for Owners and Operators

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

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

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

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

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

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

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

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

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent

practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

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

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

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

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

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

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

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

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

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

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

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011; 78 FR 6697, Jan. 30, 2013]

Testing Requirements for Owners and Operators

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

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

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

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

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

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

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

Where:

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

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

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

C_d = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

C_d = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

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

$$RF_i = \frac{C_{mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

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

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

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

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

Where:

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

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

$$C_{\text{PEq}} = 0.6098 \times C_{i\text{corr}} \quad (\text{Eq. 6})$$

Where:

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

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

Notification, Reports, and Records for Owners and Operators

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

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

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

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

(2) Maintenance conducted on the engine.

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

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

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

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

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

(2) The address of the affected source;

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

(4) Emission control equipment; and

(5) Fuel used.

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

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 78 FR 6697, Jan. 30, 2013]

General Provisions

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

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

Mobile Source Provisions

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

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

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

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

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

Definitions

§60.4248 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

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

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

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

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

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

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

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4243(d).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4243(d)(2)(ii) or (iii) and §60.4243(d)(3)(i).

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

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

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

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

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

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

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

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

Manufacturer has the meaning given in section 216(1) of the Clean Air Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for resale.

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

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

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

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

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

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to June 12, 2006, with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to either: a gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically

natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

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

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

Subpart means 40 CFR part 60, subpart JJJJ.

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

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

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

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 78 FR 6698, Jan. 30, 2013]

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

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	^c 10	387	N/A	N/A	N/A	N/A
			2.0	4.0	1.0	160	540	86

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

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

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

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

[76 FR 37975, June 28, 2011]

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

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

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

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO _x in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate.	(a) Alternatively, for NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ae} .	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03 ^e .	(c) Measurements to determine moisture must be made at the same time as the measurement for NO _x concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure NO _x at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005) ^{ae} , Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03 ^e .	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate.	(a) Alternatively, for CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ae} .	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03 ^e .	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure CO at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005) ^{ae} , Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03 ^e .	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate.	(a) Alternatively, for VOC, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ae} .	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03 ^e .	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure VOC at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Methods 25A and 18 of 40 CFR part 60, appendices A-6 and A-7, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A-6 ^{cd} , Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03 ^e .	(d) Results of this test consist of the average of the three 1-hour or longer runs.

^aAlso, you may petition the Administrator for approval to use alternative methods for portable analyzer.

^bYou may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O₂ content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17

^cYou may use EPA Method 18 of 40 CFR part 60, appendix A-6, provided that you conduct an adequate pre-survey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (<http://www.epa.gov/ttn/emc/prelim/otm11.pdf>).

^dYou may use ASTM D6420-99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic. ASTM D6420-99(2004) incorporated by reference; see 40 CFR 60.17.

^eIncorporated by reference; see 40 CFR 60.17.

[79 FR 11251, Feb. 27, 2014]

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

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

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

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

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

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

Attachment D
to a Part 70 Operating Permit No. T039-34286-00014

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Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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

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

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

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

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

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

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

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

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

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

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

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

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

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

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

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

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

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

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

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

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

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

- (4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;
- (6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

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

- (a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.
 - (2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.
 - (3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
 - (4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.
 - (5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
 - (6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.
 - (7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
- (b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

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

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

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

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

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

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

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

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

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

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

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

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

[78 FR 6701, Jan. 30, 2013]

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

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

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

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

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

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

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

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

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

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

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

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

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

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

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

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

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

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

- (3) The test must be reviewed and accepted by the Administrator.
- (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.
- (5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

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

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

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

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

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

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

- (a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).
- (b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

- (1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.
- (2) The test must not be older than 2 years.
- (3) The test must be reviewed and accepted by the Administrator.
- (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

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

§63.6615 When must I conduct subsequent performance tests?

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

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

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

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

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

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

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

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

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

R = percent reduction of CO, THC, or formaldehyde emissions.

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

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

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

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate 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, dsm³/J (dscf/106 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

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

Where:

X_{CO_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 —15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

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

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2 .

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO_2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

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

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

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

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
- (2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
- (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;
- (4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
- (5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;
- (6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.
- (7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
- (8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
- (9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and
- (10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

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

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

- (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
- (2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

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

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

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

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

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

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

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

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

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

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

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

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

- (1) The compliance demonstration must consist of at least one test run.
 - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
 - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
 - (5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.
 - (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.
 - (7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.
- (d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).
- (e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.
- (f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
- (1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

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

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

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

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

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

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

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

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

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

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

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

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

(1) Company name and address.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

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

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

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

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

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) An existing stationary emergency RICE.

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

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

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

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

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

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

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

Other Requirements and Information

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

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

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

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

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

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

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

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

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

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

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

§63.6675 What definitions apply to this subpart?

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

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

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

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

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

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

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

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

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

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

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

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

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

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

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

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

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

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

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

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

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

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

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

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

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

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

Subpart means 40 CFR part 63, subpart ZZZZ.

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

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

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

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

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

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

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

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

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

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. ¹
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR.	

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

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

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

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

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

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

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
<p>1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.</p>	<p>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</p>
<p>2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst</p>	<p>a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and</p>
	<p>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</p>
<p>3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and</p>	<p>Comply with any operating limitations approved by the Administrator.</p>
<p>New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and</p>	
<p>existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.</p>	

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

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

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

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

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
6. Emergency stationary SI RICE and black start stationary SI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. ³	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. ³	
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 .	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O ₂ .	

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

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

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

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

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

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

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

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

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

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

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

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

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥ 250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE $\geq 5,000$ HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

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

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

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

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

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. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O ₂ measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005) ^{ac} (heated probe not necessary)	(b) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) ^{abc} (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O ₂ , dry basis.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005) ^a (heated probe not necessary)	(a) Measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 ^a	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03 ^a , provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7	(a) THC concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
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/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005) ^a (heated probe not necessary)	(a) Measurements to determine O ₂ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 ^a	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03 ^a , provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005) ^{ac} , Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 ^a	(a) CO concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

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

^bYou 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.

[79 FR 11290, Feb. 27, 2014]

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

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

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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

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

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent. ^a
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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ^a ; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

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

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

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

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
<p>1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</p>	<p>Compliance report</p>	<p>a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or</p>	<p>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.</p>
		<p>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</p>	<p>i. Semiannually according to the requirements in §63.6650(b).</p>
		<p>c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).</p>	<p>i. Semiannually according to the requirements in §63.6650(b).</p>
<p>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</p>	<p>Report</p>	<p>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</p>	<p>i. Annually, according to the requirements in §63.6650.</p>
		<p>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</p>	<p>i. See item 2.a.i.</p>
		<p>c. Any problems or errors suspected with the meters.</p>	<p>i. See item 2.a.i.</p>
<p>3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year</p>	<p>Compliance report</p>	<p>a. The results of the annual compliance demonstration, if conducted during the reporting period.</p>	<p>i. Semiannually according to the requirements in §63.6650(b)(1)-(5).</p>

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

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

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

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O₂) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O₂).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O ₂)	7782-44-7	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O₂, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O₂ gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O₂ concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O₂ and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO₂ are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O₂ concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O₂; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O₂. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O₂) is acceptable for calibration of the O₂ cell. If needed, any lower percentage O₂ calibration gas must be a mixture of O₂ in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O₂ Calibration Gas Concentration.

Select an O₂ gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O₂. When the average exhaust gas O₂ readings are above 6 percent, you may use dry ambient air (20.9 percent O₂) for the up-scale O₂ calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO₂).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and O₂ concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O₂ and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ± 3 percent of the up-scale gas value or ± 1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ± 0.3 percent O₂ for the O₂ channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ± 5 percent or ± 1 ppm for CO or ± 0.5 percent O₂, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ± 2 percent or ± 1 ppm for CO or ± 0.5 percent O₂, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O₂ concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ± 2 percent, or ± 1 ppm,

whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ± 2 percent or ± 1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO₂ gas standards that are generally recognized as representative of diesel-fueled engine NO and NO₂ emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO₂ interference response should be less than or equal to ± 5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average "measurement data phase" CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ± 3 percent or ± 1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) "Development of an Electrochemical Cell Emission Analyzer Test Protocol", Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers", EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) "ICAC Test Protocol for Periodic Monitoring", EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) "Code of Federal Regulations", Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility _____ Engine I.D. _____ Date _____												
Run Type:	()		()		()		()		()			
(X)	Pre-Sample Calibration				Stack Gas Sample				Post-Sample Cal. Check		Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate	
Gas	O ₂	CO	O ₂	CO	O ₂	CO	O ₂	CO				
Sample Cond. Phase												
"												
"												
"												
"												
Measurement Data Phase												
"												
"												
"												
"												
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"												
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"												
"												
Mean												
Refresh Phase												
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[78 FR 6721, Jan. 30, 2013]

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

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

Source Background and Description

Source Name:	MasterBrand Cabinets, Inc.
Source Location:	1002 Eisenhower Drive North, Goshen, Indiana 46526
County:	Elkhart
SIC Code:	2434 (Wood Kitchen Cabinets)
Operation Permit No.:	T039-34286-00014
Permit Reviewer:	Brian Wright

On October 7, 2014, the Office of Air Quality (OAQ) had a notice published in the Goshen News, Goshen, Indiana, stating that MasterBrand Cabinets, Inc. had applied for a renewal of its existing permit and to add to the permit two (2) natural gas fired boilers, one (1) edge-banding process, two (2) natural gas emergency generators, and an UV coating operation. The notice also stated that the OAQ proposed to issue a renewal of its Part 70 Operating Permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On November 5, 2014, Erin Surinak, on behalf of MasterBrand Cabinets, Inc., submitted comments to IDEM, OAQ on the draft Part 70 Operating Permit Renewal.

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

Comment 1:

The following comments were in regard to changes in the description of certain units and correction of typographical errors.

Correction 1: The descriptions in A.2(b)(1), D.3, E.2 and the TSD are incorrect and should be revised as follows:

- (1) One (1) ~~custom parts paint~~ **pre-stain** booth, identified as C2, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SC2;

Correction 2: The descriptions in A.2(b)(13), D.3, E.2 and the TSD are incorrect and should be revised as follows. Note that operations at this booth have changed and so the note below the description is no longer applicable since there are no ovens associated with this booth and parts are no longer passed through the booth twice.

- (13) One (1) ~~molding toner~~ **parts** booth, identified as FM1, ~~using hand-operated HVLP spray guns with a maximum coating rate of 466 pieces of wood molding per hour,~~ **with a maximum rate of 25 parts per hour**, exhausting through stack

SFM1. Particulate emissions from the spray guns are controlled by dry filters.

~~Note: This booth can potentially process 600 units per hour, but input is limited by the slower speed of the upstream and downstream ovens to 233 units per hour. Since each piece is passed through this booth twice, the maximum units per hour is listed as 466 units per hour.~~

Correction 3: The descriptions in A.3(a)(1), D.1 and the TSD are incorrect and should be revised as follows:

(1) Two (2) natural gas fired boilers, identified as B4 and B5, ~~constructed in 2014~~, each rated at 1.5 MMBtu per hour and exhausting through stacks SB4 and SB5, respectively. **B4 was constructed in 2011 and B5 was constructed in 2012.** [326 IAC 6-2-4]

Correction 4: The descriptions in A.3.(c), E.1 and the TSD are incorrect and should be revised as follows:

Eight (8) edge-banding processes ~~applying veneer to wood panels, using a PVA adhesive meeting~~ **applying wood and/or PVC veneers using EVA hot melt glue or adhesive, pre-glued wood veneers, or hot stamp foil material.** **The hot melt glues and adhesives meet** the definition of a non-HAP coating, specified in 40 CFR 63, Subpart DDDD as a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds. Under 40 CFR 63, Subpart DDDD, these edge-banding processes are considered existing affected units at an existing affected source.

Correction 6: Condition D.3.1(c), second paragraph: The phrase "shall be limited" was erroneously included in this sentence and should be removed as follows:

Compliance with this limit shall limit VOC emissions from surface coating booths H1, H2, H3, H5, H6, H9, and H10 ~~shall be limited~~ to less than 250 tons of VOC per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to surface coating booths H1, H2, H3, H5, H6, H9, and H10.

Correction 7: Page 13 of 22 of the TSD: in Paragraph (2) on this page, there is a typo in the last sentence: "Pursuant to 40 CFR 63.6665, the natural gas fired emergency generator EG2 does not have to meet the requirements of 40 ~~CRF~~ **CFR** 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions."

Response to Comment 1:

IDEM agrees with the recommended changes, since they are descriptive or wording changes that do not affect rule applicability. The permit has been revised as requested above.

Comment 2:

The following comment was made in regards to the emissions statement reporting requirements.

Condition C.15 requires submission of the emission statement on a triennial basis. This is not correct. The source is required to submit annual emission statements (not every three years). Page 16 of 22 of the TSD reflects the annual requirement and the permit condition should be updated accordingly.

Response to Comment 2:

IDEM agrees with the recommended changes, since the source is required to do annual reporting. The permit has been revised as follows:

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6-6]
~~In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:~~
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(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

IDEM Contact

- (a) Questions regarding this proposed Part 70 Operating Permit Renewal can be directed to Brian Wright at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-6544 or toll free at 1-800-451-6027 extension 4-6544.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emissions Calculations
Emissions Summary**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Uncontrolled/Unlimited Potential to Emit (PTE) (tons/year) (Before Integral Woodworking Controls)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	760.50	760.50	760.50	0.00	0.00	1,451	0.00	0	9,348	2,963	MIBK
Woodworking	18,591	18,591	18,591	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259	0.36	0.35	Toluene
Totals	19,352	19,352	19,352	0.01	1.76	1,453	1.29	1,826	9,349	2,963	MIBK

Unlimited Potential to Emit (PTE) (tons/year) (After Integral Woodworking Controls)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	760.50	760.50	760.50	0.00	0.00	1,451	0.00	0	9,348	2,963	MIBK
Woodworking	18.59	18.59	18.59	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259	0.36	0.35	Toluene
Totals	779	779	779	0.01	1.76	1,453	1.29	1,826	9,349	2,963	MIBK

Limited Potential to Emit (PTE) (tons/year) (based on limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	Less Than 188.43	Less Than 188.43	Less Than 188.43	0.00	0.00	Less Than 538.80	0.00	0	9,348	2,963	MIBK
Woodworking	52.82	52.82	52.82	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259.18	0.36	0.35	Toluene
Totals	Less Than 241.28	Less Than 241.37	Less Than 241.37	0.01	1.76	Less Than 541.17	1.29	1,826	9,349	2,963	MIBK

Limited and Controlled Potential to Emit (PTE) (tons/year)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	12.12	12.12	12.12	0.00	0.00	538.80	0.00	0	9,348	2,963	MIBK
Woodworking	18.59	18.59	18.59	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259.18	0.36	0.35	Toluene
Totals	30.74	30.83	30.83	0.01	1.76	Less Than 541.17	1.29	1,826	9,349	2,963	MIBK

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Unit	Heat Input Capacity MMBtu/hr	HHV mmBtu	Potential Throughput MMCF/yr
B4	1.5	mmscf	
B5	1.5		
Total	3.0	1020	25.8

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.10	0.10	0.01	1.29	0.07	1.08

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, ChBrian Wrighter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
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	2.7E-05	1.5E-05	9.7E-04	2.3E-02	4.4E-05	0.024

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
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	6.4E-06	1.4E-05	1.8E-05	4.9E-06	2.7E-05	7.1E-05
					Total HAPs	0.024
					Worst HAP	0.023

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,546	0.03	0.03
Summed Potential Emissions in tons/yr	1,546		
CO2e Total in tons/yr	1,555		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**
Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Ebenhower Drive North, Goshen, IN 46526
Permit Number: 1039-34286-00014
Reviewer: Brian Wright

Emission Unit / Surface coating booth	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	lb VOC/gal solids	Transfer Efficiency	Uncontrolled PM10/PM2.5 Potential (lb/hr)	Uncontrolled PM10/PM2.5 Potential (tons/year)	PM10/PM2.5 Control Efficiency	Controlled PM10/PM2.5 Potential (lb/hr)	Controlled PM10/PM2.5 Potential (tons/year)	Limited PM10/PM2.5 Potential (lb/hr)	Limited PM10/PM2.5 Potential (tons/year)	Equivalent Limited Efficiency
C2	worst case coating VOC	7.58	73.98%	0.00%	85.38%	0.00%	19.84%	0.0137	25	5.02	5.02	127	41.27	7.53	35.31	41%	0.41	1.79	98.76%	0.01	0.02	0.10	0.44	75.33%
	Worst Case coating PM	7.58	73.98%	0.00%	85.38%	0.00%	19.84%	0.0137	25	5.02	5.02	127	41.27	7.53	35.31	41%	0.41	1.79	98.76%	0.01	0.02	0.10	0.44	75.33%
H1	worst case coating VOC	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
H2	worst case coating VOC	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
H3	worst case coating VOC	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
H5	worst case coating VOC	8.92	60.51%	0.00%	58.46%	0.00%	24.98%	0.0065	375	5.21	5.21	12.71	305.06	55.67	20.88	41%	5.07	22.19	97.85%	0.11	0.48			100.00%
	Worst Case coating PM	9.06	55.90%	0.00%	53.68%	0.00%	24.32%	0.0065	375	4.86	4.86	11.85	284.51	51.92	20.00	41%	5.75	25.17	97.85%	0.12	0.54	1.42	6.22	75.29%
H6	worst case coating VOC	8.92	60.51%	0.00%	58.46%	0.00%	24.98%	0.0065	375	5.21	5.21	12.71	305.06	55.67	20.88	41%	5.07	22.19	97.85%	0.11	0.48			100.00%
	Worst Case coating PM	9.06	55.90%	0.00%	53.68%	0.00%	24.32%	0.0065	375	4.86	4.86	11.85	284.51	51.92	20.00	41%	5.75	25.17	97.85%	0.12	0.54	1.42	6.22	75.29%
H9	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81	2.12	9.29	75.25%
H10	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81	2.12	9.29	75.25%
H12	worst case coating VOC	8.92	60.51%	0.00%	58.46%	0.00%	24.98%	0.0065	75	5.21	5.21	2.54	61.01	11.13	20.88	47%	0.91	3.99	97.85%	0.02	0.09			
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	75	4.40	4.40	6.00	144.11	26.30	14.47	47%	0.31	14.50	97.85%	0.07	0.31	0.82	3.59	75.24%
H19	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	97.85%	0.01	0.05			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	97.85%	0.01	0.05	0.13	0.57	74.66%
F3	worst case coating VOC	8.01	93.46%	71.21%	22.25%	68.44%	4.48%	0.0090	1000	5.65	1.78	17.57	421.75	76.97		19%	4.18	18.33	98.76%	0.05	0.23			
	Worst Case coating PM	8.37	89.53%	83.66%	5.87%	84.03%	8.54%	0.0090	1000	3.08	0.49	4.84	116.27	21.22	5.75	19%	7.00	30.66	98.76%	0.09	0.38	1.73	7.58	75.28%
F9	worst case coating VOC	8.01	93.46%	71.21%	22.25%	68.44%	4.48%	0.0090	1000	5.65	1.78	17.57	421.75	76.97		19%	4.18	18.33	98.76%	0.05	0.23			
	Worst Case coating PM	8.37	89.53%	83.66%	5.87%	84.03%	8.54%	0.0090	1000	3.08	0.49	4.84	116.27	21.22	5.75	19%	7.00	30.66	98.76%	0.09	0.38	1.73	7.58	75.28%
F15	worst case coating VOC	7.63	69.55%	0.00%	47.42%	0.00%	23.72%	0.0127	1000	3.62	3.62	45.95	1102.81	201.28	15.25	36%	18.88	82.71	98.50%	0.28	1.24			
	Worst Case coating PM	7.63	69.55%	0.00%	47.42%	0.00%	23.72%	0.0127	1000	3.62	3.62	45.95	1102.81	201.28	15.25	36%	18.88	82.71	98.50%	0.28	1.24	4.68	20.50	75.22%
F23	worst case coating VOC	8.03	0.94%	0.00%	0.04%	0.00%	99.95%	0.0031	1000	0.00	0.00	0.01	0.27	0.05	0.00	52%	13.43	58.63	99.76%	0.03	0.14			
	Worst Case coating PM	9.63	0.94%	0.00%	0.04%	0.00%	99.95%	0.0031	1000	0.00	0.00	0.01	0.27	0.05	0.00	52%	13.43	58.63	99.76%	0.03	0.14	3.33	14.59	75.21%
F30	worst case coating VOC	9.45	0.94%	0.00%	0.94%	0.00%	98.79%	0.0031	1000	0.09	0.09	0.28	6.61	1.21	0.09	52%	13.93	61.01	99.76%	0.03	0.15			
	Worst Case coating PM	9.45	0.94%	0.00%	0.94%	0.00%	98.79%	0.0031	1000	0.09	0.09	0.28	6.61	1.21	0.09	52%	13.93	61.01	99.76%	0.03	0.15	3.45	15.11	75.23%
F38	worst case coating VOC	8.08	70.07%	0.00%	70.07%	0.00%	22.93%	0.0098	1000	5.66	5.66	55.48	1331.62	243.02	24.69	36%	15.17	66.44	98.50%	0.23	1.00			
	Worst Case coating PM	8.08	70.07%	0.00%	70.07%	0.00%	22.93%	0.0098	1000	5.66	5.66	55.48	1331.62	243.02	24.69	36%	15.17	66.44	98.50%	0.23	1.00	3.76	16.47	75.21%
F51	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	98.76%	0.01	0.03			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	98.76%	0.01	0.03	0.13	0.57	74.66%
FM1	worst case coating VOC	7.85	64.00%	0.0%	54.8%	0.0%	33.83%	0.2554	25	4.30	4.30	27.48	659.49	120.36	12.72	47%	9.56	41.98	97.85%	0.12	0.52			
	Worst Case coating PM	7.85	64.00%	0.0%	54.8%	0.0%	33.83%	0.2554	25	4.30	4.30	27.48	659.49	120.36	12.72	47%	9.56	41.98	97.85%	0.12	0.52	2.97	10.38	75.21%
TOTALS												331.27	7950.49	1459.96			173.63	760.50		3.77	12.12	43.02	184.43	

Emission Unit / Surface coating booth	Limited VOC Emissions
C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51	Less Than 248.80 tons/year
H1, H2, H3, H5, H6, H9, and H10	Less Than 250.00 tons/year
FM1	Less Than 40.00 tons/year
Totals	538.80

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hr) * (gal/unit) * (lb/gal) * (1-Weight % Volatiles) * (1-Transfer efficiency) (lb/760 hrs/yr) (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lb/gal) * Weight % organics) / (Volume % solids)

* Source will limit VOC emissions from the ten (10) spray booths (C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51) to less than 248.8 tons per year to render 326 IAC 2-2 (PSD) not applicable.
** Source will limit VOC emissions from the seven (7) spray booths (H1, H2, H3, H5, H6, H9, and H10) to less than 250 tons per year to render 326 IAC 2-2 (PSD) not applicable.
** Source will limit PM and PM10 emissions from the entire source to less than 250 tons per year each to render the requirements of 326 IAC 2-2 (PSD) not applicable.

**Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Surface Coating for emission units: C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, and F51

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethyl Benzene	Weight % Glycol Ether	Weight % MIBK	Weight % Formaldehyde	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	MIBK Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	
Varnish																
L025013	7.86	0.0540	2000	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	1.49	0.00	0.00	0.00	0.00	0.00	
972-50C27-0150	7.58	0.0540	2000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00	0.00	0.00	0.00	35.86	0.00	
1735C40313	7.80	0.0540	2000	8.00%	13.00%	1.50%	0.00%	0.00%	0.00%	295.18	479.66	55.35	0.00	0.00	0.00	
1735C40307	7.71	0.0540	2000	8.00%	13.00%	0.00%	0.00%	0.00%	0.00%	291.77	474.13	0.00	0.00	0.00	0.00	
UV Spray Sealer	9.58	0.0540	2000	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36	0.00	0.05	0.00	0.00	0.00	
UV Spray Topcoat	9.11	0.0540	2000	0.27%	0.10%	0.05%	0.00%	0.00%	0.00%	11.51	4.22	2.33	0.00	0.00	0.00	
Varnish	7.95	0.0360	1000	10.00%	15.00%	5.00%	0.00%	20.00%	0.10%	125.36	188.03	62.68	0.00	250.71	1.25	
Varnish	7.95	0.0360	1000	10.00%	15.00%	5.00%	0.00%	20.00%	0.10%	125.36	188.03	62.68	0.00	250.71	1.25	
Stains																
L019131	8.43	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
Toffee Spray A/B Stain	7.26	0.0540	2000	0.00%	1.50%	0.00%	43.00%	0.00%	0.00%	0.00	51.51	0.00	1476.74	0.00	0.00	
Frost Wiping Stain	7.42	0.0540	2000	8.00%	0.00%	1.00%	0.00%	0.00%	0.00%	280.80	0.00	35.10	0.00	0.00	0.00	
Burgundy Wipe Stain	7.43	0.0540	2000	8.00%	0.00%	4.00%	0.00%	0.00%	0.00%	281.17	0.00	140.59	0.00	0.00	0.00	
Carmel Spray Stain	7.05	0.0540	2000	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00	0.00	33.35	0.00	0.00	0.00	
L.H. Ash Wiping Stain	8.03	0.0540	2000	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	151.94	0.00	0.00	0.00	0.00	0.00	
Sorrell Stain	7.12	0.0540	2000	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00	0.00	0.00	134.72	0.00	0.00	
White Primer	9.81	0.0540	2000	6.00%	22.00%	1.00%	0.00%	9.00%	0.10%	278.43	1020.91	46.41	0.00	417.65	4.59	
L.H. Ash Wiping Stain	7.98	0.0540	2000	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	150.99	0.00	0.00	0.00	0.00	0.00	
LH Sign Med W/S	9.16	0.0540	2000	17.00%	0.00%	4.00%	0.00%	0.00%	0.00%	736.62	0.00	173.32	0.00	0.00	0.00	
Burgundy Pre-stain	6.80	0.0540	2000	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00	0.00	0.00	128.67	0.00	0.00	
Hickory Wipe Stain	6.64	0.0540	2000	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	94.23	0.00	0.00	0.00	0.00	0.00	
1310D00937	6.72	0.0540	2000	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	63.58	0.00	0.00	0.00	0.00	0.00	
W.B. Opal	10.18	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
KBR Silk Enamel	9.12	0.0540	2000	0.00%	5.00%	0.00%	10.00%	20.00%	0.10%	0.00	215.71	0.00	431.41	862.82	4.31	
Light Hickory UV Stain	8.31	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
Stain	12.10	0.0540	2000	0.00%	5.00%	1.00%	0.00%	20.00%	0.10%	0.00	286.19	57.24	0.00	1144.76	5.72	
Total PTE of HAPs (tons/year)										1294.37	2382.76	413.63	1908.15	2962.51	17.14	
PTE of Total Combined HAPs (tons/year) for this page												8978.57				

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

** NESHAP 40 CFR 63, Subpart JJ - The source has demonstrated compliance with Subpart JJ by submitting Certified Product Data Sheet Reports for each coating used.

** Each stain, sealer and topcoat has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied.

**Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Surface Coating for emission units: C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, and F51

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Acetaldehyde	Weight % Styrene	Weight % Acrolein	Weight % Mn Cmpd.	Weight % Cumene	Acetaldehyde Emissions (ton/yr)	Styrene Emissions (ton/yr)	Acrolein Emissions (ton/yr)	Mn Cmpd. Emissions (ton/yr)	Cumene Emissions (ton/yr)
Varnish													
L025013	7.86	0.0540	2000	0.06%	1.30%	0.06%	0.00%	0.00%	2.37	48.29	2.37	0.00	0.00
972-50C27-0150	7.58	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
1735C40313	7.80	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
1735C40307	7.71	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
UV Spray Sealer	9.58	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.004%	0.00	0.00	0.00	0.00	0.18
UV Spray Topcoat	9.11	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.01%	0.00	0.00	0.00	0.00	0.26
Varnish	7.95	0.0360	1000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Varnish	7.95	0.0360	1000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Stains													
L019131	8.43	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Toffee Spray A/B Stain	7.26	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Frost Wiping Stain	7.42	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Burgundy Wipe Stain	7.43	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Carmel Spray Stain	7.05	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
L.H. Ash Wiping Stain	8.03	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Sorrell Stain	7.12	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
White Primer	9.81	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
L.H. Ash Wiping Stain	7.98	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
LH Sign Med W/S	9.16	0.0540	2000	0.00%	0.00%	0.00%	2.00%	0.00%	0.00	0.00	0.00	86.66	0.00
Burgundy Prestain	6.80	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Hickory Wipe Stain	6.64	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
1310D00937	6.72	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
W.B. Opal	10.18	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
KBR Silk Enamel	9.12	0.0540	2000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00	215.71	0.00	0.00	0.00
Light Hickory UV Stain	8.31	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Stain	12.10	0.0540	2000	0.01%	0.00%	0.001%	0.00%	0.00%	0.46	0.00	0.06	0.00	0.00

Total PTE of HAPs (tons/year)	2.83	264.00	2.43	86.66	0.44
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PTE of Total Combined HAPs (tons/year) for this page	356.35
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METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Mn Cmpd. emission rate (tons/yr) = Density (lb/gal) * Gal. of Material (gal/unit) * Maximum (unit/hr) * Weight % Mn Cmpd. * (1-Wt. % Volatile) * (1-Transfer Eff.) * 8760 hrs/yr * 1 ton/2000 lbs

NESHAP 40 CFR 63, Subpart JJ - The source has demonstrated compliance with Subpart JJ by submitting Certified Product Data Sheet Reports for each coating used.

The source has verified that each stain, sealer and topcoat has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied.

**Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operation FM1**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Surface Coating for emission units: FM1 only

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MIBK	Weight % Xylene	Weight % Ethyl Benzene	MIBK Emissions (ton/yr)	Xylene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)
Autumn Stain	7.26	0.0002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Burgundy Stain	8.16	0.0049	466.0	0.00%	8.00%	4.00%	0.00	6.56	3.28
Carmel Stain	7.48	0.001	466.0	0.00%	0.00%	1.00%	0.00	0.00	0.19
Chestnut Brushing Stain	7.80	0.0002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Frost Stain	7.79	0.001	466.0	0.00%	8.00%	1.00%	0.00	1.15	0.14
Hickory Stain	8.28	0.002	466.0	0.00%	3.00%	0.00%	0.00	1.25	0.00
Oak Stain	7.65	0.002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Sable Stain	7.49	0.0005	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Sorrell Stain	8.34	0.002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Spice UV Stain	8.26	0.001	466.0	5.00%	0.00%	0.00%	0.83	0.00	0.00
Spray 100% UV Coat	9.28	0.008	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00

Total PTE of HAPs (tons/year)	0.83	8.95	3.61
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PTE of Total Combined HAPs (tons/year) for this page	13.39
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METHODOLOGY

Uncontrolled HAP emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Woodworking Operations WW1 through WW14 and WW17

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Operation	Baghouse	Air Flow (acfm)	Outlet Grain Loading (gr/ascf)	Control Efficiency (%)	Uncontrolled PM/PM10/PM2.5 Emissions (lb/hr)*	Uncontrolled PM/PM10/PM2.5 Emissions (tons/yr)*	Controlled PM/PM10/PM2.5 Emissions (lb/hr)*	Controlled PM/PM10/PM2.5 Emissions (tons/yr)*	326 IAC 6.5 Limit (gr/dscf)	Limited Particulate Emissions based on 326 IAC 6.5 (lb/hr)	PSD Minor PM/PM10/PM2.5 Limited Emissions (lbs/hr)	PSD Minor PM/PM10/PM2.5 Limited Emissions (tons/yr)	Equivalent Limited Efficiency (%)
WW1	CC1	72,000	0.001	99.9%	617	2,703	0.62	2.70	0.03	18.51	1.36	5.96	99.78%
WW2	CC2	72,000	0.001	99.9%	617	2,703	0.62	2.70	0.03	18.51	1.36	5.96	99.78%
WW3	CC3	23,000	0.001	99.9%	197	863	0.20	0.86	0.03	5.91	0.44	1.93	99.78%
WW4	CC4	46,700	0.001	99.9%	400	1,753	0.40	1.75	0.03	12.01	0.88	3.85	99.78%
WW5	CC5	46,700	0.001	99.9%	400	1,753	0.40	1.75	0.03	12.01	0.88	3.85	99.78%
WW6	CC6	46,700	0.001	99.9%	400	1,753	0.40	1.75	0.03	12.01	0.88	3.85	99.78%
WW7	CC7	23,000	0.001	99.9%	197	863	0.20	0.86	0.03	5.91	0.44	1.93	99.78%
WW8	CC8	19,400	0.001	99.9%	166	728	0.17	0.73	0.03	4.99	0.37	1.62	99.78%
WW9	SCC01	23,000	0.001	99.9%	197	863	0.20	0.86	0.03	5.91	0.44	1.93	99.78%
WW10	SCC02	34,300	0.001	99.9%	294	1,288	0.29	1.29	0.03	8.82	0.65	2.85	99.78%
WW11	SCC04	27,400	0.001	99.9%	235	1,029	0.23	1.03	0.03	7.05	0.52	2.28	99.78%
WW12													
WW13	CC10	61,000	0.001	99.9%	523	2,290	0.52	2.29	0.03	15.69	3.84	16.82	99.27%
WW14													
WW17													
Total					4,245	18,591	4.24	18.59		127.34	12.06	52.82	

Methodology

*PM10 and PM2.5 emissions assumed equal to PM emissions
Controlled Emissions (lbs/hr) = Air Flow (acfm) * Grain Loading (grains/ascf) * 60 (min/hr) / 7000 (grains/lb)
Controlled Emissions (ton/yr) = Controlled Emissions (lbs/hr) * (8760 hrs/yr) / 2000 (lbs/ton)
Uncontrolled Emissions (lbs/hr) = Controlled Emissions (ton/yr) / (1 - Control Efficiency)
Uncontrolled Emissions (ton/yr) = Uncontrolled Emissions (lbs/hr) * (8760 hrs/yr) / 2000 (lbs/ton)
Limited Particulate Emissions based on 326 IAC 6.5 (lb/hr) = Air Flow (acfm) * Limit (grains/dscf) * 60 (min/hr) / 7000 (grains/lb)
Limited Particulate Emissions based on 326 IAC 6.5 (ton/yr) = Limited Particulate Emissions based on 326 IAC 6.5 (lb/hr) * (8760 hr/yr) / 2000 (lbs/ton)
Uncontrolled Emissions (lbs/hr) = Controlled Emissions (ton/yr) / (1 - Control Efficiency)
PSD Minor PM/PM10/PM2.5 Limited Emissions (tons/yr) = PSD Minor PM/PM10/PM2.5 Limited Emissions (lbs/hr) * (8760 hrs/yr) / 2000 (lbs/ton)
Equivalent Limited Efficiency (%) = 1 - [PSD Minor PM/PM10/PM2.5 Limited Emissions (lbs/hr) / Uncontrolled Emissions (lbs/hr)]

**Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
2-Stroke Lean-Burn (2SLB) Engines**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Maximum Output Horsepower Rating (hp)	43	Unit	Horsepower
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500	EG1	16
Maximum Hours Operated per Year (hr/yr)	500	EG2	27
Potential Fuel Usage (MMBtu/yr)	161	Total	43
High Heat Value (MMBtu/MMscf)	1020		
Potential Fuel Usage (MMcf/yr)	0.16		

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	4.83E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.00	0.00	0.00	0.000	0.26	0.01	0.03

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.
PM2.5 emission factor is filterable PM2.5 + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	7.76E-03	0.001
Acrolein	7.78E-03	0.001
Benzene	1.94E-03	0.000
1,3-Butadiene	8.20E-04	0.000
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.004
Methanol	2.48E-03	0.000
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.000
2,2,4-Trimethylpentane	8.46E-04	0.000
Total PAH**	1.34E-04	0.000
Total		0.01

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)]*[Brake Specific Fuel Consumption (Btu/hp-hr)]*[Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	
Emission Factor in lb/MMCF**			2.2
Potential Emission in tons/yr	8.87	0.10	0.00
Summed Potential Emissions in tons/yr	8.97		
CO2e Total in tons/yr	11.44		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [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

(25) + N2O Potential Emission ton/yr x N2O GWP (298).

Abbreviations

PM = Particulate Matter	NOx = Nitrous Oxides	CO2 = Carbon Dioxide
PM10 = Particulate Matter (<10 um)	VOC = Volatile Organic Compounds	CH4 = Methane
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	N2O = Nitrous Oxide
		CO2e = CO2 equivalent emissions

**Appendix A: Emissions Calculations
Banding Process**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Adhesive Density = 9 lbs/gal

	Max Throughput	Adhesive	Adhesive	VOC	Vinyl acetate	VOC		Vinyl Acetate
	parts/hr	grams/part	gal/part	lb/gal	lb/gal	lbs/hour	tpy	tpy
1	10	5.6	0.0014	0.0834	0.0834	0.001	0.01	0.01
2	10	na	na	0.0834	0.0834	na	na	na
3	240	na	na	0.0834	0.0834	na	na	na
4	200	17	0.0042	0.0834	0.0834	0.07	0.30	0.30
5	200	11.4	0.0028	0.0834	0.0834	0.05	0.20	0.20
6	250	na	na	0.0834	0.0834	na	na	na
7	150	na	na	0.0834	0.0834	na	na	na
8	200	5.6	0.0014	0.0834	0.0834	0.02	0.10	0.10
Total						0.14	0.61	0.61

Methodology

Adhesive (gal/part) = Adhesive (grams/part) * (lb/453.6 grams) / Density (lbs/gal)

Adhesive density is a conservative estimate

VOC (lbs/hour) = Adhesive (gal/part) * parts/hour * VOC Density (lb/gal)

VOC (tpy) = VOC (lb/hour* * 8760 hours/year * ton/2000 lbs

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf			Potential Throughput MMCF/yr			
0.5	1020			4.3			
	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	0.004	0.02	0.02	0.001	0.21	0.01	0.18

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, ChBrian Wrighter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
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	4.5E-06	2.6E-06	1.6E-04	3.9E-03	7.3E-06	4.0E-03
	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
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	1.1E-06	2.4E-06	3.0E-06	8.2E-07	4.5E-06	1.2E-05
					Total HAPs	4.1E-03
					Worst HAP	3.9E-03

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	258	0.005	0.005
Summed Potential Emissions in tons/yr	258		
CO2e Total in tons/yr	259		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations

**VOC
Dip Tanks**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Coating	Density (Lb/Gal)	Weight % VOC	% Toluene	% Formaldehyde	gallons per hour	Potential VOC tons per year	Toluene (tons/yr)	Formaldehyde (tons/yr)	Total HAP (tons/yr)
Butyl Acetate	6.8	74.3%	16%	0.02%	0.08	1.67	0.35	0.00	0.35

Methodology

VOC Emissions (tons/yr) = [Gallons per unit] * [Units per Hour] * [Density (lbs/gallon)] * [Weight % VOC] / [2000 lbs/ton] * [8760 hours/yr]

Individual HAP Emissions (tons/yr) = [Gallons per unit] * [Units per Hour] * [Density (lbs/gallon)] * [Weight %HAP] / [2000 lbs/ton] * [8760 hours/yr]

Total HAP = Sum of all individual HAPs

Adhesive (gal/part) = Adhesive (grams/part) * (lb/453.6 grams) / Density (lbs/gal)

Adhesive density is a conservative estimate

VOC (lbs/hour) = Adhesive (gal/part) * parts/hour * VOC Density (lb/gal)

VOC (tpy) = VOC (lb/hour) * 8760 hours/year * ton/2000 lbs

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description
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Source Name:	MasterBrand Cabinets, Inc.
Source Location:	1002 Eisenhower Drive North, Goshen, IN 46526
County:	Elkhart
SIC Code:	2434 (Wood Kitchen Cabinets)
Permit Renewal No.:	T039-34286-00014
Permit Reviewer:	Brian Wright

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from MasterBrand Cabinets, Inc. relating to the operation of a stationary wood furniture manufacturing operation. On March 10, 2014, MasterBrand Cabinets, Inc., submitted an application to the OAQ requesting to renew its operating permit. MasterBrand Cabinets was issued its second Part 70 Operating Permit Renewal T039-34286-00014 on December 28, 2009.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) Woodworking Operations consisting of:
 - (1) One (1) woodworking cell, identified as WW1, constructed in 2004, controlled by a 72,000 cubic feet per minute baghouse, identified as CC1, and exhausting either internally or to stack SCC1.
 - (2) One (1) woodworking cell, identified as WW2, constructed in 2001, controlled by a 72,000 cubic feet per minute baghouse, identified as CC2, and exhausting either internally or to stack SCC2.
 - (3) One (1) woodworking cell, identified as WW4, constructed in 2004, controlled by a 46,700 cubic feet per minute baghouse, identified as CC4, and exhausting either internally or to stack SCC4.
 - (4) One (1) woodworking cell, identified as WW5, constructed in 1988, controlled by a 46,700 cubic feet per minute baghouse, identified as CC5, and exhausting either internally or to stack SCC5.
 - (5) One (1) woodworking cell, identified as WW6, constructed in 1989, controlled by a 46,700 cubic feet per minute baghouse, identified as CC6, and exhausting either internally or to stack SCC6.

- (b) Eighteen (18) spray booths C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 with the following descriptions:
 - Finishing - Customs Line
 - (1) One (1) custom parts paint booth, identified as C2, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SC2;

Finishing - Hang Line

- (2) Three (3) hanging line stain booths, identified as H1, H2, and H3, with a total maximum rating of 1,125 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH1, SH2, and SH3;
- (3) Two (2) hanging line sealer booths, identified as H5 and H6, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks ID SH5 and SH6;
- (4) Two (2) hanging line topcoat booths, identified as H9 and H10, with a total maximum rating of 750 units per hour (375 each), with particulate emissions controlled by dry filters, exhausting at Stacks SH9 and SH10;
- (5) One (1) white parts booth identified as H12, with a maximum rating of 75 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks ID SH12a and SH12b;
- (6) One (1) hanging line parts booth identified as H19, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stack ID SH19;

Finishing - Flat Line (UV Line)

- (7) One (1) automated stain line, identified as F3, with a maximum capacity of coating 1000 units per hour, utilizing a high volume low pressure spray application, with particulate emissions controlled by dry filters, and exhausting to stacks SF3, SF4a, and SF4b;
- (8) One (1) automated stain line, identified as F9, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing a high volume low pressure spray application system with particulate emissions controlled by dry filters, exhausting to stack SF9;
- (9) Two (2) automated varnish lines, identified as F15 and F38, each with a maximum capacity of coating 1000 units per hour, (2000 total) utilizing an airless spray application, with particulate emissions controlled by water curtain systems, and exhausting to stacks F15 and SF38, respectively;
- (10) One (1) automated varnish line, identified as F23, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF23;
- (11) One (1) automated varnish line, identified as F30, with a maximum capacity of coating 1000 units per hour, consisting of one (1) enclosed spray booth utilizing an airless spray application system with particulate emissions controlled by dry filters, exhausting to stack SF30;
- (12) One (1) flat line parts booth, identified as F51, with a maximum rating of 25 units per hour, with particulate emissions controlled by dry filters, exhausting at Stacks SF51a and SF51b;

Finishing - Molding Line

- (13) One (1) molding toner booth, identified as FM1, using hand operated HVLP spray guns with a maximum coating rate of 466 pieces of wood molding per hour, exhausting through stack SFM1. Particulate emissions from the spray guns are controlled by dry filters.

Note: This booth can potentially process 600 units per hour, but input is limited by the slower speed of the upstream and downstream ovens to 233 units per hour. Since each piece is passed through this booth twice, the maximum units per hour is listed as 466 units per hour.

Under the National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (NESHAP) (40 CFR 63, Subpart JJ), the surface coating operations C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 are considered existing units at an existing affected source.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

The source also consists of the following emission units that were constructed and/or are operating without a permit (lettering as indicated in the permit):

- (a) One (1) natural gas fired emergency generator, identified as EG2, constructed in 2014 and manufactured in 2014, with a maximum output of 27 HP.

This generator is an affected source under 40 CFR 60, Subpart JJJJ and a new affected source under 40 CFR 63, Subpart ZZZZ.

Emission Units and Pollution Control Equipment Removed From the Source

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu per hour including the following:
- (1) Three (3) natural gas fired boilers, identified as B1, B2, and B3, each rated at 1.7 MMBtu per hour and exhausting through stacks SB1, SB2, and SB3, respectively. [326 IAC 6-2-4]
- (b) One (1) sealer/topcoat booth, identified as FM6, using automated HVLP spray guns with a maximum coating rate of 466 pieces of wood molding per hour, all exhausting through stacks SFM6a through SFM6c. Particulate emissions from the spray guns are controlled by dry filters.

Insignificant Activities

The source also consists of the following insignificant activities (lettering as indicated in the permit):

- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2(e)(2)]
- (c) Eight (8) edge-banding processes applying veneer to wood panels, using a PVA adhesive meeting the definition of a non-HAP coating, specified in 40 CFR 63, Subpart DDDD as a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR

1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds. Under 40 CFR 63, Subpart DDDD, these edge-banding processes are considered existing affected units at an existing affected source.

- (d) Woodworking Operations (Insignificant pursuant to 326 IAC 2-7-21(G)(xxx)) consisting of:
- (1) One (1) woodworking cell, identified as WW3, constructed in 2001, controlled by a 23,000 cubic feet per minute baghouse, identified as CC3, and exhausting either internally or to stack SCC3. [326 IAC 6-3-2]
 - (2) One (1) woodworking cell, identified as WW7, constructed in 1989, controlled by a 23,000 cubic feet per minute baghouse, identified as CC7, and exhausting either internally or to stack SCC7. [326 IAC 6-3-2]
 - (3) One (1) woodworking cell, identified as WW8, constructed in 1989, controlled by a 19,400 cubic feet per minute baghouse, identified as CC8, and exhausting either internally or to stack SCC8. [326 IAC 6-3-2]
 - (4) One (1) woodworking cell, identified as WW9, constructed in 1987, controlled by a 23,000 cubic feet per minute baghouse, identified as SCC01, and exhausting either internally or to stack SSCC01. [326 IAC 6-3-2]
 - (5) One (1) woodworking cell, identified as WW10, constructed in 1987, controlled by a 34,330 cubic feet per minute baghouse, identified as SCC02, and exhausting either internally or to stack SSCC02. [326 IAC 6-3-2]
 - (6) One (1) woodworking cell, identified as WW11, constructed in 1987, controlled by a 27,400 cubic feet per minute baghouse, identified as SCC04, and exhausting either internally or to stack SSCC04. [326 IAC 6-3-2]
 - (7) One (1) woodworking cell, identified as WW12, constructed in 1989, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
 - (8) One (1) woodworking cell, identified as WW13, constructed in 2005, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
 - (9) One (1) woodworking cell, identified as WW14, constructed in 2001, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
 - (10) One (1) woodworking cell, identified as WW17, constructed in 1997, controlled by a 61,000 cubic feet per minute baghouse installed in 2009 identified as CC10 and exhausting to stack SCC10, or exhausting internally. [326 IAC 6-3-2]
- (e) Grinding and machining 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 actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2(e)(2)]
- (f) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu per hour including the following:

- (1) Two (2) natural gas fired boilers, identified as B4 and B5, constructed in 2014, each rated at 1.5 MMBtu per hour and exhausting through stacks SB4 and SB5, respectively. [326 IAC 6-2-4]

- (g) One (1) edge-banding process applying wood and/or PVC veneers using EVA hot melt glue or adhesive, pre-glued wood veneers, or hot stamp foil material. The hot melt glues and adhesives meet the definition of a non-HAP coating, specified in 40 CFR 63, Subpart DDDD as a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds. Under 40 CFR 63, Subpart DDDD, these edge-banding processes are considered existing affected units at an existing affected source.

- (h) One (1) natural gas fired emergency generator, identified as EG1, constructed in 2003 and manufactured in 2003, with a maximum output of 16 HP.

This generator is an existing affected source under 40 CFR 63, Subpart ZZZZ.

- (i) One (1) UV glazing process, constructed in 2014, consisting of:
 - (1) One (1) surface coating process, applied by syringe, with a maximum throughput of 0.075 gallons per hour.

 - (2) One (1) natural gas fired curing oven, with a maximum heat input of 0.5 MMBtu per hour.

Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal No. T039-27414-00014 on December 28, 2009, the source has constructed or has been operating under the following additional approvals:

- (a) Administrative Amendment No. 039-29199-00014 issued on May 25, 2010; and

- (b) Administrative Amendment No. 039-30861-00014 issued on September 20, 2011.

Air Pollution Control Justification as an Integral Part of the Process

In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter from the woodworking operations were calculated after consideration of the controls for purposes of determining permit level and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) applicability. However, for purposes of determining the applicability of Prevention of Significant Deterioration (PSD) applicability, potential particulate matter emissions from the woodworking operations were calculated before consideration of controls.

Enforcement Issue

IDEM is aware that equipment has been constructed and/or operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit". IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the operating permit rules.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
Elkhart County has been classified as attainment for PM_{2.5}. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (e) **Other Criteria Pollutants**
Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance

Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	19,352
PM ₁₀	19,532
PM _{2.5}	19,532
SO ₂	0.01
NO _x	1.76
VOC	1,453
CO	1.29
GHGs as CO ₂ e	1,826
Total HAP	9,349
Single HAP	2,963 MIBK

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{2.5}, PM₁₀, and VOC is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

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
Surface Coating	<188.43	<188.43	<188.43	0.00	0.00	<538.80	0.00	0	9,348	2,963 MIBK
Woodworking	52.82	52.82	52.82	0.00	0.00	0.00	0.00	0	0.00	0.00
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02 Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.22	0.01	0.03	10	0.01	0.00
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.61 Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259.18	0.36	0.35 Toluene
Total PTE of Entire Source	<241.28	<241.37	<241.37	0.01	1.76	<541.17	1.29	1,826	9,349	2,963 MIBK
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO ₂ e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA	NA
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant". **PM _{2.5} listed is direct PM _{2.5} .										

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) The source wide GHG emissions are less than one hundred thousand (<100,000) tons of CO₂ equivalent (CO₂e) emissions per year. GHG emissions do not affect the source PSD status.
- (c) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA)..

Federal Rule Applicability

Compliance Assurance Monitoring

- (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.

Woodworking Operations									
Unit ID	Pollutant	Control Device ID / Description		Emission Limitation (Y/N)	Uncontrolled PTE (tons/yr)	Controlled PTE (tons/yr)	Major Source Threshold (tons/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
WW1	PM/PM ₁₀ /PM _{2.5}	CC1	B	Y	>100	<100	100	Y	N
WW2	PM/PM ₁₀ /PM _{2.5}	CC2	B	Y	>100	<100	100	Y	N
WW4	PM/PM ₁₀ /PM _{2.5}	CC4	B	Y	>100	<100	100	Y	N
WW5	PM/PM ₁₀ /PM _{2.5}	CC5	B	Y	>100	<100	100	Y	N
WW6	PM/PM ₁₀ /PM _{2.5}	CC6	B	Y	>100	<100	100	Y	N
WW3	PM/PM ₁₀ /PM _{2.5}	CC3	B	Y	>100	<100	100	Y	N
WW7	PM/PM ₁₀ /PM _{2.5}	CC7	B	Y	>100	<100	100	Y	N
WW8	PM/PM ₁₀ /PM _{2.5}	CC8	B	Y	>100	<100	100	Y	N
WW9	PM/PM ₁₀ /PM _{2.5}	SCC01	B	Y	>100	<100	100	Y	N
WW10	PM/PM ₁₀ /PM _{2.5}	SCC02	B	Y	>100	<100	100	Y	N
WW11	PM/PM ₁₀ /PM _{2.5}	SCC04	B	Y	>100	<100	100	Y	N
WW12	PM/PM ₁₀ /PM _{2.5}	T4	B	Y	>100	<100	100	Y	N
WW13	PM/PM ₁₀ /PM _{2.5}	T1	D	Y	>100	<100	100	Y	N
WW14	PM/PM ₁₀ /PM _{2.5}	T2	D	Y	>100	<100	100	Y	N
WW17	PM/PM ₁₀ /PM _{2.5}	T6	D	Y	>100	<100	100	Y	N

B = Baghouse
 D = Dust collector

(b) Existing woodworking emission units - Compliance Assurance Monitoring (CAM)

- (1) Each of the woodworking facilities has the potential to emit (before controls) of PM/PM₁₀/PM_{2.5} greater than major source thresholds, is subject to a PM/PM₁₀/PM_{2.5} limit, and uses a control device to achieve that limit. Therefore, all of the woodworking facilities and the associated baghouses and dust collectors are subject to the requirements of CAM for PM/PM₁₀/PM_{2.5}.
- (2) Each of the woodworking facilities are not large pollutant specific emission units, as defined in 40 CFR 64.5(a), since each has potential to emit of PM/PM₁₀/PM_{2.5} after controls less than 100% of major source thresholds. Pursuant to 40 CFR 64.3, the compliance monitoring required for these units (see Compliance Determination and Monitoring section) is sufficient to satisfy CAM requirements for these units.

Surface Coating Operations										
Emission unit Previously Identified as:	Surface Coating Emission Unit	Pollutant	Control Device ID / Description		Emission Limitation (Y/N)	Uncontrolled PTE (tons/yr)	Controlled PTE (tons/yr)	Major Source Threshold (tons/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
Finishing - Hang Line										
EU-34	H1	PM/PM ₁₀ /PM _{2.5}	SH1	D	Y	<100	<100	100	N	N
EU-34	H2	PM/PM ₁₀ /PM _{2.5}	SH2	D	Y	<100	<100	100	N	N
EU-34	H3	PM/PM ₁₀ /PM _{2.5}	SH3	D	Y	<100	<100	100	N	N
EU-35	H5	PM/PM ₁₀ /PM _{2.5}	SH5	D	Y	<100	<100	100	N	N
EU-35	H6	PM/PM ₁₀ /PM _{2.5}	SH6	D	Y	<100	<100	100	N	N
EU-36	H9	PM/PM ₁₀ /PM _{2.5}	SH9	D	Y	<100	<100	100	N	N
EU-36	H10	PM/PM ₁₀ /PM _{2.5}	SH10	D	Y	<100	<100	100	N	N
EU-11	H12	PM/PM ₁₀ /PM _{2.5}	SH12a- SH12b	D	Y	<100	<100	100	N	N
EU-12	H19	PM/PM ₁₀ /PM _{2.5}	SH19	D	Y	<100	<100	100	N	N
Flat Line (UV Line)										
EU-27	F3	PM/PM ₁₀ /PM _{2.5}	SF3, SF4a- SF4b	D	Y	<100	<100	100	N	N
EU-31	F9	PM/PM ₁₀ /PM _{2.5}	SF9	D	Y	<100	<100	100	N	N
EU-28	F15	PM/PM ₁₀ /PM _{2.5}	SF15	W	Y	<100	<100	100	N	N
EU-32	F23	PM/PM ₁₀ /PM _{2.5}	SF23	D	Y	<100	<100	100	N	N
EU-33	F30	PM/PM ₁₀ /PM _{2.5}	SF30	D	Y	<100	<100	100	N	N
EU-29	F38	PM/PM ₁₀ /PM _{2.5}	SF38	W	Y	<100	<100	100	N	N
EU-10	F51	PM/PM ₁₀ /PM _{2.5}	S51a- S51b	D	Y	<100	<100	100	N	N
Customs										
EU-3	C2	PM/PM ₁₀ /PM _{2.5}	SC2	D	Y	<100	<100	100	N	N
Molding Line										
EU-40	FM1	PM/PM ₁₀ /PM _{2.5}	SFM1	D	Y	<100	<100	100	N	N
D = dry filters W = water curtain										

(c) Existing surface coating emission units - Compliance Assurance Monitoring (CAM)

Each of the surface coating facilities is subject to a PM/PM₁₀/PM_{2.5} limit, and uses a control device to achieve that limit. However, the potential to emit (before controls) of PM/PM₁₀/PM_{2.5} is below major source thresholds. Therefore, all of the surface coating facilities and the associated dry filters and waterwashes are not subject to the requirements of CAM for PM/PM₁₀/PM_{2.5}.

Note: Any and all modifications that would result in the existing surface coating units and/or new surface coating units being subject to the requirements of CAM need prior IDEM, OAQ approval. The Operator Training Program utilized for compliance monitoring of these units is not sufficient to satisfy the compliance requirements of CAM.

New Source Performance Standards (NSPS)

- (c) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit for the natural gas fired boilers (B4 and B5, each 1.5 MMBtu/hr) because each boiler has a design heat input capacity less than 2.9 MW (10 MMBtu/hr).
- (d) The requirements of the New Source Performance Standard for Surface Coating of Metal Furniture, 40 CFR 60, Subpart EE (326 IAC 12), are not included in this permit since the source does not coat metal furniture.
- (e) The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (326 IAC 12), are not included in this permit for the natural gas fired emergency generator EG1 since the generator was manufactured before January 1, 2009.

The natural gas emergency generator EG2 is subject to the requirements of 40 CFR 60, Subpart JJJJ (326 IAC 12), since the generator was manufactured on or after January 1, 2009 and has a maximum output of greater than 25 HP.

The natural gas emergency generator (EG2) is subject the following applicable portions of the NSPS:

- (1) 40 CFR 60.4230(a)(4)(iv)
- (2) 40 CFR 60.4233(d)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4325
- (5) 40 CFR 60.4236
- (6) 40 CFR 60.4237(c)
- (7) 40 CFR 60.4243(d)
- (8) 40 CFR 60.4245(b)
- (9) 40 CFR 60.4248
- (10) Table 3

- (f) There are no other New Source Performance Standards (326 IAC 12 and 40 CFR Part 60) included in this permit renewal.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (g) The surface coating operations at the source are subject to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart JJ (326 IAC 20-14), because the source is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components, and the source is a major source of HAPs as defined in 40 CFR 63.2.

Under the National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (NESHAP), 40 CFR 63, Subpart JJ, the surface coating operations identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, F51 and FM1 are existing affected units at an existing affected source.

Under the National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (NESHAP) (40 CFR 63, Subpart JJ), the surface coating operations identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, F51, and FM1 are existing affected units at an existing affected source.

Nonapplicable portions of the NSPS will not be included in the permit. The surface coating operations at this source are associated with the manufacture of wood furniture or components and are subject to the following portions of 40 CFR 63, Subpart JJ:

- (1) 40 CFR 63.800(a), (g), (h), and (i)
- (2) 40 CFR 63.801
- (3) 40 CFR 63.802(a) and (c)
- (4) 40 CFR 63.803
- (5) 40 CFR 63.804(a) through (c) and (f) through (h)
- (6) 40 CFR 63.805
- (7) 40 CFR 63.806
- (8) 40 CFR 63.807
- (9) 40 CFR 63.808
- (10) Table 1
- (11) Table 2
- (12) Table 3
- (13) Table 4
- (14) Table 5
- (15) Table 6

- (h) The insignificant edge-banding operations are subject to the requirements of National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products, 40 CFR 63, Subpart DDDD, because the source adheres veneer to a wood substrate with adhesive and it is a major source of HAPs.

Pursuant to 40 CFR 63, Subpart DDDD, the insignificant edge-banding operations are subject to the following portions of 40 CFR 63, Subpart DDDD:

- (1) 40 CFR 63.2230
- (2) 40 CFR 63.2231 (a) and (b)
- (3) 40 CFR 63.2232 (a), (b) and (e)
- (4) 40 CFR 63.2233 (b) and (d)
- (5) 40 CFR 63.2250 (a) and (b)
- (6) 40 CFR 63.2252

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 63 Subpart DDDD.

- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products, 40 CFR 63, Subpart QQQQ (326 IAC 20-79), are not included in this permit because cabinets are not defined under 40 CFR 63.4781 as building products.
- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture, 40 CFR 63, Subpart RRRR (326 IAC 20-78), are not included in this permit because the facility does not manufacture metal furniture and not a major source of HAP.
- (k) The requirements of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ (326 IAC 20-82), are included in this permit. The natural gas fired emergency generator EG1 is an existing affected sources (construction commenced before June 12, 2006) under 40 CFR 63.6590 located at a major source of hazardous air pollutants (HAP). The natural gas fired emergency generator EG2 is a new affected sources (construction commenced on or after June 12, 2006) under 40 CFR 63.6590 located at a major source of hazardous air pollutants (HAP).

- (1) The natural gas fired emergency generator EG1 is subject the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006), which has a site rating of less than or equal to 300 brake horsepower (HP) at an major source of HAP:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(ii)
- (4) 40 CFR 63.6595(a)(1)
- (5) 40 CFR 63.6602
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)
- (8) 40 CFR 63.6640(f)
- (9) 40 CFR 63.6645(a)(5)
- (10) 40 CFR 63.6655(e)
- (11) 40 CFR 63.6660
- (12) 40 CFR 63.6665
- (13) Table 2c
- (14) Table 8

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the souce except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

- (2) The natural gas fired emergency generator EG2 is subject the following applicable portions of the NESHAP for new emergency stationary RICE (construction commenced on or after June 12, 2006), which has a site rating of less than or equal to 500 brake horsepower (HP) at an major source of HAP:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(c)(7)
- (4) 40 CFR 63.6665
- (5) 40 CFR 63.6670
- (6) 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, the natural gas fired emergency generator EG2 does not have to meet the requirements of 40 CRF 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

- (I) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)

The source is subject to 326 IAC 1-5-2.

326 IAC 2-2 (Prevention of Significant Deterioration) (PSD) and 326 IAC 2-3 (Emission Offset)

- (a) Pursuant to Minor Source Modification No. 039-13961-00014, issued on April 24, 2001, Minor Source Modification No. 039-17118-00014, issued on June 4, 2003, and as revised

by Permit Renewal No. T039-34286-00014, PM, PM10, and PM2.5 emissions from the entire source shall each be less than 250 tons per twelve (12) consecutive month period. To comply with this limit, the total PM, PM10, and PM2.5 emissions from the woodworking facilities identified as, WW1 through WW14 and WW17, shall not exceed the limits specified in the following table:

Emission Unit	ID	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
Woodworking Cell	WW1	1.36	1.36	1.36
Woodworking Cell	WW2	1.36	1.36	1.36
Woodworking Cell	WW3	0.44	0.44	0.44
Woodworking Cell	WW4	0.88	0.88	0.88
Woodworking Cell	WW5	0.88	0.88	0.88
Woodworking Cell	WW6	0.88	0.88	0.88
Woodworking Cell	WW7	0.44	0.44	0.44
Woodworking Cell	WW8	0.37	0.37	0.37
Woodworking Cell	WW9	0.44	0.44	0.44
Woodworking Cell	WW10	0.65	0.65	0.65
Woodworking Cell	WW11	0.52	0.52	0.52
Woodworking Cell*	WW12	3.84	3.84	3.84
Woodworking Cell*	WW13			
Woodworking Cell*	WW14			
Woodworking Cell*	WW17			

*Emissions from these units are controlled by the one baghouse (CC10)

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide PM, PM10, and PM2.5 emissions to less than 250 tons per year, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

- (b) Pursuant to Minor Source Modification No. 039-13961-00014, issued on April 24, 2001, Minor Source Modification No. 039-17118-00014, issued on June 4, 2003, and as revised by Permit Renewal No. T039-34286-00014, PM, PM10, and PM2.5 emissions from the entire source shall each be less than 250 tons per twelve (12) consecutive month period. This limitation includes equipment listed in sections D.1 through D.4. To comply with this limit, the total PM, PM10, and PM2.5 emissions from the spray booths, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, F51, and FM1 shall not exceed the limits specified in the following table:

Emission Unit ID	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
C2	0.10	0.10	0.10
H1	4.57	4.57	4.57
H2	4.57	4.57	4.57
H3	4.57	4.57	4.57
H5	1.42	1.42	1.42
H6	1.42	1.42	1.42
H9	2.12	2.12	2.12

Emission Unit ID	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
H10	2.12	2.12	2.12
H12	0.82	0.82	0.82
H19	0.13	0.13	0.13
F3	1.73	1.73	1.73
F9	1.73	1.73	1.73
F15	4.68	4.68	4.68
F23	3.33	3.33	3.33
F30	3.45	3.45	3.45
F38	3.76	3.76	3.76
F51	0.13	0.13	0.13
FM1	2.37	2.37	2.37

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide PM, PM10, and PM2.5 emissions to less than 250 tons per year, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

- (c) Pursuant to Minor Source Modification No. 039-13961-00014, issued on April 24, 2001, Minor Source Modification No. 039-17118-00014, issued on June 4, 2003, and Minor Permit Modification No. 039-17224-00014, issued on July 7, 2003, the VOC input, including coatings, dilution solvents, and cleaning solvents to surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51 shall be less than 248.8 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall limit VOC emissions from surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51 to less than 248.8 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to surface coating booths C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51.

- (d) Pursuant to Significant Source Modification No. 039-17310-00014, issued on September 26, 2003, and Significant Permit Modification No. 039-17815-00014, issued on October 17, 2003, the VOC input, including coatings, dilution solvents, and cleaning solvents, to surface coating booths H1, H2, H3, H5, H6, H9, and H10 shall be limited to less than 250 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall limit VOC emissions from surface coating booths H1, H2, H3, H5, H6, H9, and H10 shall be limited to less than 250 tons of VOC per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to surface coating booths H1, H2, H3, H5, H6, H9, and H10.

The 1997 8-hour ozone nonattainment designations in 69 FR 23858 were incorporated in 326 IAC 1-4-1 effective December 12, 2004. Elkhart County was designated a basic nonattainment area for the 1997 8-hour ozone standard at that time. The source was determined to be a major source under 326 IAC 2-3 (Emission Offset), because emissions of VOC were greater than 100 tons per year. When the source added two (2) surface coating emission units, identified as FM1 and FM6 (originally identified as EU 40 and EU 41) in Minor Source Modification No. 039-23626-

00014, issued on November 2, 2006, the increase in VOC emissions due to this modification were less than the significance threshold levels for 326 IAC 2-3 (Emission Offset). As such, this modification to an existing major Emission Offset source was not major, the requirements of 326 IAC 2-3 (Emission Offset) were not included, and no limits for VOC emissions were established for those units. Elkhart County was re-designated as an attainment area for the 1997 8-hour ozone standard effective July 19, 2007. Elkhart County was later designated as unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. The particulate emissions from these units were included in the existing source-wide PM₁₀, and PM_{2.5} PSD minor emission limits of less than 250 tons per twelve (12) consecutive month period.

As part of Permit Renewal 039-27414-00014, issued December 28, 2009, the potential to emit (PTE) calculations were revised for FM1 and FM6, where the unlimited PTE was increased to 120.76 tons VOC per year and 70.51 tons PM/PM₁₀/PM_{2.5} per year. In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to booth FM1, the Permittee shall comply with the following:

- (e) Pursuant to Minor Source Modification No. 039-23626-00014, issued on November 2, 2006, and as revised by Permit Renewal No. T039-34286-00014, VOC input, including coatings, dilution solvents, and cleaning solvents, to booth FM1 shall be less than 40 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall limit VOC emissions from booth FM1 to less than 40 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to booth FM1.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The potential to emit HAP from this source is greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. However, all of the facilities and/or emission units generating significant HAP emissions are specifically regulated by NESHAP 40 CFR 63, Subpart JJ or NESHAP 40 CFR 63, Subpart DDDD, which were each issued pursuant to Section 112(d) of the CAA. Therefore, pursuant to 326 IAC 2-4.1-1(b)(2), compliance with these NESHAPs renders the source exempt from the requirements of 326 IAC 2-4.1.

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 pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC is greater than 250 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted by July 1, 2015, and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

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

- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4:
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated pursuant to 326 IAC 6-4-5(c). Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM.

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

This source is not subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), because this source was constructed prior to December 13, 1985, and this source does not have the potential to emit twenty-five (25) tons per year of fugitive particulate matter.

State Rule Applicability – Individual Facilities

Woodworking Operations

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

Pursuant to 326 IAC 6-3-2, particulate emissions from the Millwork Woodworking equipment, WW1 through WW14 and WW17, each shall be limited by the following:

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

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

In order to comply with this limit, each baghouse and dust collector for particulate control shall be in operation at all times when any of the woodworking facilities, identified as WW1 through WW14 and WW17, are in operation.

Surface Coating

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

Pursuant to 326 IAC 6-3-2(d), particulate from each of the surface coating operations at the source, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51 and FM1 shall be controlled by dry particulate filters, waterwashes, or equivalent control devices, and the Permittee shall operate the control devices in accordance with manufacturer's specifications.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

Pursuant to 326 IAC 8-1-6(1)(a), the requirement to reduce VOC emissions using the Best Available Control Technology (BACT) does not apply to the surface coating operations at this source because these operations are subject to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating).

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-12, the surface coating applied to wood furniture and cabinets in surface coating booths C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51 and FM1 shall utilize one of the following methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application

Heated Airless Spray Application
 Roller Coating
 Brush or Wipe Application
 Dip-and Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pound per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

The source utilizes High Volume Low Pressure (HVLP) spray application or Air Assisted Airless Spray application methods for all surface coating operations; therefore, the source is able to comply with 326 IAC 8-2-12.

326 IAC 8-11 (Wood Furniture Coatings)

Pursuant to 326 IAC 8-11(1), the surface coating operations at the source, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51 and FM1 are not subject to the requirements of 326 IAC 8-11 since the source is not located in Lake, Porter, Clark, or Floyd Counties.

Natural Gas Combustion

326 IAC 6-2 (Particulate Emissions Limitations for Source of Indirect Heating)

Pursuant to 326 IAC 6-2-4, the curing oven for the UV glazing process is not subject to the requirements of 326 IAC 6-2 because the curing oven is not a source of indirect heat.

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), PM emissions from the two (2) boilers, each with a maximum heat input capacity of 1.5 MMBtu per hour, identified as B4 and B5, shall not exceed 0.60 pound per MMBtu of heat input. These units are subject to the requirements of 326 IAC 6-2-4 because they are indirect heating facilities that were constructed after September 21, 1983.

Emission Unit ID	Approximate Construction Date	Approximate Date Removed	Maximum Capacity (MMBtu/hr)	Q (MMBtu/hr)	Regulated By	Pt (lb/MMBtu)
EU 1	1977	2009	17.0	17.0	326 IAC 6-2-3	0.60
EU30	never constructed	never constructed	NA	NA	NA	NA
B1	November 2001	March 2014	1.7	17.0 + 1.7 + 1.7 + 1.7 = 22.1	326 IAC 6-2-4	0.49
B2			1.7			
B3			1.7			
B4	March 2014	NA	1.5	1.5 + 1.5 = 3.0	326 IAC 6-2-4	0.60
B5			1.5			

Note: EU1, B1, B2, and B3 were all removed from the source prior to the construction of B4 and B5. Therefore, the Q for B4 and B5 is equal to 1.5 + 1.5 = 3.0 MMBtu/hr.

Based on the combustion calculations provided in Appendix A of this document, the potential PM emissions from each boiler are less than the allowable limit; therefore, these units are able to comply with 326 IAC 6-2-4 without the use of a control device.

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

The two (2) boilers (B4 and B5) are not subject to the requirements of 326 IAC 6-3 because these facilities are combustion units utilized for indirect heating, which are specifically exempted by 326 IAC 6-3-1(b)(1).

Pursuant to 326 IAC 6-3-1(b)(14), the cure oven is not subject to the requirements of 326 IAC 6-3-2 since the potential particulate emissions for the oven are less than 0.551 pounds per hour.

Emergency Generators (EG1 and EG2)

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-1, the natural gas emergency generators (EG1 and EG2) are each not subject to the requirements of 326 IAC 6-2 because the generators are not sources of indirect heat.

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

The two (2) natural gas emergency generators (EG1 and EG2) are each not subject to the requirements of 326 IAC 6-3, since they each are not a "manufacturing process" as defined by 326 IAC 6-3-1.5.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

Pursuant to 326 IAC 7-1.1-1, the two (2) natural gas emergency generators (EG1 and EG2) are each not subject to the requirements of 326 IAC 7-1, since each has unlimited sulfur dioxide (SO₂) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The two (2) natural gas emergency generators (EG1 and EG2) are each not subject to the requirements of 326 IAC 8-1-6, since each has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

Edge-Banding Process

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

Pursuant to 326 IAC 6-3-1(b)(6), the eight (8) edge-banding processes are not subject to the requirements of 326 IAC 6-3 because the processes use roll coating to apply the veneer.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The eight (8) edge-banding processes are each not subject to the requirements of 326 IAC 8-1-6, since each has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-1(a)(4), the eight (8) edge-banding processes are each not subject to the requirements of 326 IAC 8-2-10 since each has unlimited VOC emissions of less than fifteen (15) pounds per day.

326 IAC 8-11 (Wood Furniture Coatings)

Pursuant to 326 IAC 8-11(1), the eight (8) edge-banding processes are not subject to the requirements of 326 IAC 8-11 since the source is not located in Lake, Porter, Clark, or Floyd Counties.

Machining Operations

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

Pursuant to 326 IAC 6-3-2(e)(2), the particulate from the insignificant activities related to grinding, machining, brazing and welding shall be limited to five hundred fifty-one thousandths (0.551) pound per hour

UV Coating Operation

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(15), the UV coating operation is not subject to the requirements of 326 IAC 6-3 because the operation uses less than 5 gallons per day of coating.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The UV coating operation is not subject to the requirements of 326 IAC 8-1-6, since each has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)
Pursuant to 326 IAC 8-2-1(a)(4), the UV coating operation is each not subject to the requirements of 326 IAC 8-2-10 since each has unlimited VOC emissions of less than fifteen (15) pounds per day.

326 IAC 8-11 (Wood Furniture Coatings)
Pursuant to 326 IAC 8-11(1), the UV coating operation is not subject to the requirements of 326 IAC 8-11 since the source is not located in Lake, Porter, Clark, or Floyd Counties.

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 2-7-4. 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.

- (a) The woodworking operations, identified as WW1 through WW14 and WW17,, and controlled by baghouses CC1 through CC8, T1 through T7, SCC01, SCC02, and SCC04, each have applicable compliance monitoring conditions as specified below:

Emission Unit	Control	Operating Parameters	Frequency
Woodworking Operations (WW1 through WW14 and WW17)	CC1 through CC8, SCC01, SCC02, SCC04, SCC10,	Visible Emissions	Once per day

These monitoring conditions are necessary because the baghouses and dust collectors for the wood-working operations must operate properly to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-7 (Part 70).

- (b) The surface coating operations, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 each have applicable compliance monitoring conditions as specified below:

- (a) Particulate from all of the surface coating operations at the source, identified as C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F38, F23, F30, F51, and FM1 shall be controlled by dry particulate filters, waterwashes, or an equivalent control device, and the Permittee shall operate the control devices in accordance with manufacturer's specifications. Each of these surface coating operations have applicable compliance monitoring conditions as specified below:

The Permittee shall implement an operator training program.

- (1) All operators that perform surface coating operations using spray equipment or booth maintenance shall be trained in the proper set-up and operation of the particulate control systems. All existing operators shall be trained within 60 days of the date of permit issuance. All new operators shall be trained upon hiring or transfer.
- (2) Training shall include proper filter alignment, filter inspection and maintenance, water wash inspection and maintenance, and troubleshooting practices. The training program shall be written and retained on site. The training program shall include a description of the methods to be used at the completion of initial and refresher training to demonstrate and document successful completion. Copies of the training program, the list of trained operators and training records shall be maintained on site.
- (3) All operators shall be given refresher training annually.

These monitoring conditions are necessary because the dry filters and water wash systems for the surface coating operations must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-2 (PSD), and 326 IAC 2-7 (Part 70). Note: these monitoring conditions will not satisfy the requirements of CAM if any of the existing booths, or additional booths in the future should become subject to the requirements of CAM.

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 March 10, 2014. Additional information was received on July 22, 2014 and August 22, 2014.

Conclusion

The operation of this stationary wood furniture manufacturing operation shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T039-34286-00014.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Brian Wright at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-6544 or toll free at 1-800-451-6027 extension 4-6544.

- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>

- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emissions Calculations
Emissions Summary**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Uncontrolled/Unlimited Potential to Emit (PTE) (tons/year) (Before Integral Woodworking Controls)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	760.50	760.50	760.50	0.00	0.00	1,451	0.00	0	9,348	2,963	MIBK
Woodworking	18,591	18,591	18,591	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259	0.36	0.35	Toluene
Totals	19,352	19,352	19,352	0.01	1.76	1,453	1.29	1,826	9,349	2,963	MIBK

Unlimited Potential to Emit (PTE) (tons/year) (After Integral Woodworking Controls)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	760.50	760.50	760.50	0.00	0.00	1,451	0.00	0	9,348	2,963	MIBK
Woodworking	18.59	18.59	18.59	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259	0.36	0.35	Toluene
Totals	779	779	779	0.01	1.76	1,453	1.29	1,826	9,349	2,963	MIBK

Limited Potential to Emit (PTE) (tons/year) (based on limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	Less Than 188.43	Less Than 188.43	Less Than 188.43	0.00	0.00	Less Than 538.80	0.00	0	9,348	2,963	MIBK
Woodworking	52.82	52.82	52.82	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259.18	0.36	0.35	Toluene
Totals	Less Than 241.28	Less Than 241.37	Less Than 241.37	0.01	1.76	Less Than 541.17	1.29	1,826	9,349	2,963	MIBK

Limited and Controlled Potential to Emit (PTE) (tons/year)

Emission Units	PM	PM-10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP	
Surface Coating	12.12	12.12	12.12	0.00	0.00	538.80	0.00	0	9,348	2,963	MIBK
Woodworking	18.59	18.59	18.59	0.00	0.00	0.00	0.00	0	0.00	0.00	
NG Boilers	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555	0.02	0.02	Hexane
Emergency Generators	0.00	0.00	0.00	0.00	0.26	0.01	0.03	11	0.01	0.00	
Banding Process	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61	0.61	Vinyl Acetate
UV Glaze Process	0.00	0.02	0.02	0.00	0.21	1.68	0.18	259.18	0.36	0.35	Toluene
Totals	30.74	30.83	30.83	0.01	1.76	Less Than 541.17	1.29	1,826	9,349	2,963	MIBK

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Unit	Heat Input Capacity MMBtu/hr	HHV mmBtu	Potential Throughput MMCF/yr
B4	1.5	mmscf	
B5	1.5		
Total	3.0	1020	25.8

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.10	0.10	0.01	1.29	0.07	1.08

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, ChBrian Wrighter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					Total - 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	2.7E-05	1.5E-05	9.7E-04	2.3E-02	4.4E-05	0.024

	HAPs - Metals					Total - 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	6.4E-06	1.4E-05	1.8E-05	4.9E-06	2.7E-05	7.1E-05
					Total HAPs	0.024
					Worst HAP	0.023

Methodology is the same as above.

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

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,546	0.03	0.03
Summed Potential Emissions in tons/yr	1,546		
CO2e Total in tons/yr	1,555		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O

Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
 VOC and Particulate
 From Surface Coating Operations

Company Name: MasterBrand Cabinets, Inc.
 Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
 Permit Number: 1039-34286-00014
 Reviewer: Brian Wright

Emission Unit / Surface coating booth	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	lb VOC/gal solids	Transfer Efficiency	Uncontrolled PM10/PM2.5 Potential (lb/hr)	Uncontrolled PM10/PM2.5 Potential (tons/year)	PM10/PM2.5 Control Efficiency	Controlled PM10/PM2.5 Potential (lb/hr)	Controlled PM10/PM2.5 Potential (tons/year)	Limited PM10/PM2.5 Potential (lb/hr)	Limited PM10/PM2.5 Potential (tons/year)	Equivalent Limited Efficiency
C2	worst case coating VOC	7.58	73.98%	0.00%	85.38%	0.00%	19.84%	0.0137	25	5.02	5.02	127	41.27	7.53	35.31	41%	0.41	1.79	98.76%	0.01	0.02	0.10	0.44	75.33%
	Worst Case coating PM	7.58	73.98%	0.00%	85.38%	0.00%	19.84%	0.0137	25	5.02	5.02	127	41.27	7.53	35.31	41%	0.41	1.79	98.76%	0.01	0.02	0.10	0.44	75.33%
H1	worst case coating VOC	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
H2	worst case coating VOC	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
H3	worst case coating VOC	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	375	4.40	4.40	30.02	720.55	131.50	14.47	41%	18.43	80.73	97.85%	0.40	1.74	4.57	20.02	75.20%
H5	worst case coating VOC	8.92	60.51%	0.00%	58.46%	0.00%	24.98%	0.0065	375	5.21	5.21	12.71	305.06	55.67	20.88	41%	5.07	22.19	97.85%	0.11	0.48			
	Worst Case coating PM	9.06	55.90%	0.00%	53.68%	0.00%	24.32%	0.0065	375	4.86	4.86	11.85	284.51	51.92	20.00	41%	5.75	25.17	97.85%	0.12	0.54	1.42	6.22	75.29%
H6	worst case coating VOC	8.92	60.51%	0.00%	58.46%	0.00%	24.98%	0.0065	375	5.21	5.21	12.71	305.06	55.67	20.88	41%	5.07	22.19	97.85%	0.11	0.48			100.00%
	Worst Case coating PM	9.06	55.90%	0.00%	53.68%	0.00%	24.32%	0.0065	375	4.86	4.86	11.85	284.51	51.92	20.00	41%	5.75	25.17	97.85%	0.12	0.54	1.42	6.22	75.29%
H9	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81	2.12	9.29	75.25%
H10	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	375	4.30	4.30	22.11	530.70	96.85	12.72	41%	8.57	37.52	97.85%	0.18	0.81	2.12	9.29	75.25%
H12	worst case coating VOC	8.92	60.51%	0.00%	58.46%	0.00%	24.98%	0.0065	75	5.21	5.21	2.54	61.01	11.13	20.88	47%	0.91	3.99	97.85%	0.02	0.09			
	Worst Case coating PM	9.73	52.96%	0.00%	45.21%	0.00%	30.41%	0.0182	75	4.40	4.40	6.00	144.11	26.30	14.47	47%	3.31	14.50	97.85%	0.07	0.31	0.82	3.59	75.24%
H19	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	97.85%	0.01	0.05			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	97.85%	0.01	0.05	0.13	0.57	74.66%
F3	worst case coating VOC	8.01	93.46%	71.21%	22.25%	68.44%	4.48%	0.0090	1000	5.65	1.78	17.57	421.75	76.97		19%	4.18	18.33	98.76%	0.05	0.23			
	Worst Case coating PM	8.37	89.53%	83.66%	5.87%	84.03%	8.54%	0.0090	1000	3.08	0.49	4.84	116.27	21.22	5.75	19%	7.00	30.66	98.76%	0.09	0.38	1.73	7.58	75.28%
F9	worst case coating VOC	8.01	93.46%	71.21%	22.25%	68.44%	4.48%	0.0090	1000	5.65	1.78	17.57	421.75	76.97		19%	4.18	18.33	98.76%	0.05	0.23			
	Worst Case coating PM	8.37	89.53%	83.66%	5.87%	84.03%	8.54%	0.0090	1000	3.08	0.49	4.84	116.27	21.22	5.75	19%	7.00	30.66	98.76%	0.09	0.38	1.73	7.58	75.28%
F15	worst case coating VOC	7.63	69.55%	0.00%	47.42%	0.00%	23.72%	0.0127	1000	3.62	3.62	45.95	1102.81	201.28	15.25	36%	18.88	82.71	98.50%	0.28	1.24			
	Worst Case coating PM	7.63	69.55%	0.00%	47.42%	0.00%	23.72%	0.0127	1000	3.62	3.62	45.95	1102.81	201.28	15.25	36%	18.88	82.71	98.50%	0.28	1.24	4.68	20.50	75.22%
F23	worst case coating VOC	8.03	0.94%	0.00%	0.04%	0.00%	99.95%	0.0031	1000	0.00	0.00	0.01	0.27	0.05	0.00	52%	13.43	58.83	99.76%	0.03	0.14			
	Worst Case coating PM	9.63	0.94%	0.00%	0.04%	0.00%	99.95%	0.0031	1000	0.00	0.00	0.01	0.27	0.05	0.00	52%	13.43	58.83	99.76%	0.03	0.14	3.33	14.59	75.21%
F30	worst case coating VOC	9.45	0.94%	0.00%	0.94%	0.00%	98.79%	0.0031	1000	0.09	0.09	0.28	6.61	1.21	0.09	52%	13.93	61.01	99.76%	0.03	0.15			
	Worst Case coating PM	9.45	0.94%	0.00%	0.94%	0.00%	98.79%	0.0031	1000	0.09	0.09	0.28	6.61	1.21	0.09	52%	13.93	61.01	99.76%	0.03	0.15	3.45	15.11	75.23%
F38	worst case coating VOC	8.08	70.07%	0.00%	70.07%	0.00%	22.93%	0.0098	1000	5.66	5.66	55.48	1331.62	243.02	24.69	36%	15.17	66.44	98.50%	0.23	1.00			
	Worst Case coating PM	8.08	70.07%	0.00%	70.07%	0.00%	22.93%	0.0098	1000	5.66	5.66	55.48	1331.62	243.02	24.69	36%	15.17	66.44	98.50%	0.23	1.00	3.76	16.47	75.21%
F51	worst case coating VOC	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	98.76%	0.01	0.03			
	Worst Case coating PM	7.85	64.00%	0.00%	54.83%	0.00%	33.83%	0.0137	25	4.30	4.30	1.47	35.38	6.46	12.72	47%	0.51	2.25	98.76%	0.01	0.03	0.13	0.57	74.66%
FM1	worst case coating VOC	7.85	64.00%	0.0%	54.8%	0.0%	33.83%	0.0137	466	4.30	4.30	27.48	659.49	120.36	12.72	47%	9.56	41.98	97.85%	0.12	0.52			
	Worst Case coating PM	7.85	64.00%	0.0%	54.8%	0.0%	33.83%	0.0137	466	4.30	4.30	27.48	659.49	120.36	12.72	47%	9.56	41.98	97.85%	0.12	0.52	2.97	10.38	75.21%
TOTALS												331.27	7950.49	1459.96			173.63	760.50		3.77	12.12	43.02	184.43	

Emission Unit / Surface coating booth	Limited VOC Emissions
C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51	Less Than 248.80 tons/year
H1, H2, H3, H5, H6, H9, and H10	Less Than 250.00 tons/year
FM1	Less Than 40.00 tons/year
Totals	538.80

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
 Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
 Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
 Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
 Particulate Potential Tons per Year = (units/hr) * (gal/unit) * (lb/gal) * (1-Weight % Volatiles) * (1-Transfer efficiency) (lb/760 hrs/yr) (1 ton/2000 lbs)
 Pounds VOC per Gallon of Solids = (Density (lb/gal) * Weight % organics) / (Volume % solids)

* Source will limit VOC emissions from the ten (10) spray booths (C2, H12, H19, F3, F9, F15, F23, F30, F38, and F51) to less than 248.8 tons per year to render 326 IAC 2-2 (PSD) not applicable.
 ** Source will limit VOC emissions from the seven (7) spray booths (H1, H2, H3, H5, H6, H9, and H10) to less than 250 tons per year to render 326 IAC 2-2 (PSD) not applicable.

** Source will limit PM and PM10 emissions from the entire source to less than 250 tons per year each to render the requirements of 326 IAC 2-2 (PSD) not applicable.

**Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Surface Coating for emission units: C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, and F51

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethyl Benzene	Weight % Glycol Ether	Weight % MIBK	Weight % Formaldehyde	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	MIBK Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)
Varnish															
L025013	7.86	0.0540	2000	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	1.49	0.00	0.00	0.00	0.00	0.00
972-50C27-0150	7.58	0.0540	2000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00	0.00	0.00	0.00	35.86	0.00
1735C40313	7.80	0.0540	2000	8.00%	13.00%	1.50%	0.00%	0.00%	0.00%	295.18	479.66	55.35	0.00	0.00	0.00
1735C40307	7.71	0.0540	2000	8.00%	13.00%	0.00%	0.00%	0.00%	0.00%	291.77	474.13	0.00	0.00	0.00	0.00
UV Spray Sealer	9.58	0.0540	2000	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36	0.00	0.05	0.00	0.00	0.00
UV Spray Topcoat	9.11	0.0540	2000	0.27%	0.10%	0.05%	0.00%	0.00%	0.00%	11.51	4.22	2.33	0.00	0.00	0.00
Varnish	7.95	0.0360	1000	10.00%	15.00%	5.00%	0.00%	20.00%	0.10%	125.36	188.03	62.68	0.00	250.71	1.25
Varnish	7.95	0.0360	1000	10.00%	15.00%	5.00%	0.00%	20.00%	0.10%	125.36	188.03	62.68	0.00	250.71	1.25
Stains															
L019131	8.43	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Toffee Spray A/B Stain	7.26	0.0540	2000	0.00%	1.50%	0.00%	43.00%	0.00%	0.00%	0.00	51.51	0.00	1476.74	0.00	0.00
Frost Wiping Stain	7.42	0.0540	2000	8.00%	0.00%	1.00%	0.00%	0.00%	0.00%	280.80	0.00	35.10	0.00	0.00	0.00
Burgundy Wipe Stain	7.43	0.0540	2000	8.00%	0.00%	4.00%	0.00%	0.00%	0.00%	281.17	0.00	140.59	0.00	0.00	0.00
Carmel Spray Stain	7.05	0.0540	2000	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00	0.00	33.35	0.00	0.00	0.00
L.H. Ash Wiping Stain	8.03	0.0540	2000	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	151.94	0.00	0.00	0.00	0.00	0.00
Sorrell Stain	7.12	0.0540	2000	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00	0.00	0.00	134.72	0.00	0.00
White Primer	9.81	0.0540	2000	6.00%	22.00%	1.00%	0.00%	9.00%	0.10%	278.43	1020.91	46.41	0.00	417.65	4.59
L.H. Ash Wiping Stain	7.98	0.0540	2000	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	150.99	0.00	0.00	0.00	0.00	0.00
LH Sign Med W/S	9.16	0.0540	2000	17.00%	0.00%	4.00%	0.00%	0.00%	0.00%	736.62	0.00	173.32	0.00	0.00	0.00
Burgundy Pre-stain	6.80	0.0540	2000	0.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00	0.00	0.00	128.67	0.00	0.00
Hickory Wipe Stain	6.64	0.0540	2000	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	94.23	0.00	0.00	0.00	0.00	0.00
1310D00937	6.72	0.0540	2000	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	63.58	0.00	0.00	0.00	0.00	0.00
W.B. Opal	10.18	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
KBR Silk Enamel	9.12	0.0540	2000	0.00%	5.00%	0.00%	10.00%	20.00%	0.10%	0.00	215.71	0.00	431.41	862.82	4.31
Light Hickory UV Stain	8.31	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Stain	12.10	0.0540	2000	0.00%	5.00%	1.00%	0.00%	20.00%	0.10%	0.00	286.19	57.24	0.00	1144.76	5.72
Total PTE of HAPs (tons/year)										1294.37	2382.76	413.63	1908.15	2962.51	17.14
PTE of Total Combined HAPs (tons/year) for this page												8978.57			

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

** NESHAP 40 CFR 63, Subpart JJ - The source has demonstrated compliance with Subpart JJ by submitting Certified Product Data Sheet Reports for each coating used.

** Each stain, sealer and topcoat has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied.

**Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operations**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Surface Coating for emission units: C2, H1, H2, H3, H5, H6, H9, H10, H12, H19, F3, F9, F15, F23, F30, F38, and F51

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Acetaldehyde	Weight % Styrene	Weight % Acrolein	Weight % Mn Cmpd.	Weight % Cumene	Acetaldehyde Emissions (ton/yr)	Styrene Emissions (ton/yr)	Acrolein Emissions (ton/yr)	Mn Cmpd. Emissions (ton/yr)	Cumene Emissions (ton/yr)	
Varnish														
L025013	7.86	0.0540	2000	0.06%	1.30%	0.06%	0.00%	0.00%	2.37	48.29	2.37	0.00	0.00	
972-50C27-0150	7.58	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
1735C40313	7.80	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
1735C40307	7.71	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
UV Spray Sealer	9.58	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.004%	0.00	0.00	0.00	0.00	0.18	
UV Spray Topcoat	9.11	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.01%	0.00	0.00	0.00	0.00	0.26	
Varnish	7.95	0.0360	1000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Varnish	7.95	0.0360	1000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Stains														
L019131	8.43	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Toffee Spray A/B Stain	7.26	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Frost Wiping Stain	7.42	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Burgundy Wipe Stain	7.43	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Carmel Spray Stain	7.05	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
L.H. Ash Wiping Stain	8.03	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Sorrell Stain	7.12	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
White Primer	9.81	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
L.H. Ash Wiping Stain	7.98	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
LH Sign Med W/S	9.16	0.0540	2000	0.00%	0.00%	0.00%	2.00%	0.00%	0.00	0.00	0.00	86.66	0.00	
Burgundy PreStain	6.80	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Hickory Wipe Stain	6.64	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
1310D00937	6.72	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
W.B. Opal	10.18	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
KBR Silk Enamel	9.12	0.0540	2000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00	215.71	0.00	0.00	0.00	
Light Hickory UV Stain	8.31	0.0540	2000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	
Stain	12.10	0.0540	2000	0.01%	0.00%	0.001%	0.00%	0.00%	0.46	0.00	0.06	0.00	0.00	
Total PTE of HAPs (tons/year)									2.83	264.00	2.43	86.66	0.44	
PTE of Total Combined HAPs (tons/year) for this page														356.35

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Mn Cmpd. emission rate (tons/yr) = Density (lb/gal) * Gal. of Material (gal/unit) * Maximum (unit/hr) * Weight % Mn Cmpd. * (1-Wt. % Volatile) * (1-Transfer Eff.) * 8760 hrs/yr * 1 ton/2000 lbs

NESHAP 40 CFR 63, Subpart JJ - The source has demonstrated compliance with Subpart JJ by submitting Certified Product Data Sheet Reports for each coating used.

The source has verified that each stain, sealer and topcoat has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied.

**Appendix A: Emission Calculations
HAP Emission Calculations
From Surface Coating Operation FM1**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Surface Coating for emission units: FM1 only

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MIBK	Weight % Xylene	Weight % Ethyl Benzene	MIBK Emissions (ton/yr)	Xylene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)
Autumn Stain	7.26	0.0002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Burgundy Stain	8.16	0.0049	466.0	0.00%	8.00%	4.00%	0.00	6.56	3.28
Carmel Stain	7.48	0.001	466.0	0.00%	0.00%	1.00%	0.00	0.00	0.19
Chestnut Brushing Stain	7.80	0.0002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Frost Stain	7.79	0.001	466.0	0.00%	8.00%	1.00%	0.00	1.15	0.14
Hickory Stain	8.28	0.002	466.0	0.00%	3.00%	0.00%	0.00	1.25	0.00
Oak Stain	7.65	0.002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Sable Stain	7.49	0.0005	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Sorrell Stain	8.34	0.002	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00
Spice UV Stain	8.26	0.001	466.0	5.00%	0.00%	0.00%	0.83	0.00	0.00
Spray 100% UV Coat	9.28	0.008	466.0	0.00%	0.00%	0.00%	0.00	0.00	0.00

Total PTE of HAPs (tons/year)	0.83	8.95	3.61
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PTE of Total Combined HAPs (tons/year) for this page	13.39
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METHODOLOGY

Uncontrolled HAP emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Woodworking Operations WW1 through WW14 and WW17

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Operation	Baghouse	Air Flow (acfm)	Outlet Grain Loading (gr/ascf)	Control Efficiency (%)	Uncontrolled PM/PM10/PM2.5 Emissions (lb/hr)*	Uncontrolled PM/PM10/PM2.5 Emissions (tons/yr)*	Controlled PM/PM10/PM2.5 Emissions (lb/hr)*	Controlled PM/PM10/PM2.5 Emissions (tons/yr)*	326 IAC 6.5 Limit (gr/dscf)	Limited Particulate Emissions based on 326 IAC 6.5 (lb/hr)	PSD Minor PM/PM10/PM2.5 Limited Emissions (lbs/hr)	PSD Minor PM/PM10/PM2.5 Limited Emissions (tons/yr)	Equivalent Limited Efficiency (%)
WW1	CC1	72,000	0.001	99.9%	617	2,703	0.62	2.70	0.03	18.51	1.36	5.96	99.78%
WW2	CC2	72,000	0.001	99.9%	617	2,703	0.62	2.70	0.03	18.51	1.36	5.96	99.78%
WW3	CC3	23,000	0.001	99.9%	197	863	0.20	0.86	0.03	5.91	0.44	1.93	99.78%
WW4	CC4	46,700	0.001	99.9%	400	1,753	0.40	1.75	0.03	12.01	0.88	3.85	99.78%
WW5	CC5	46,700	0.001	99.9%	400	1,753	0.40	1.75	0.03	12.01	0.88	3.85	99.78%
WW6	CC6	46,700	0.001	99.9%	400	1,753	0.40	1.75	0.03	12.01	0.88	3.85	99.78%
WW7	CC7	23,000	0.001	99.9%	197	863	0.20	0.86	0.03	5.91	0.44	1.93	99.78%
WW8	CC8	19,400	0.001	99.9%	166	728	0.17	0.73	0.03	4.99	0.37	1.62	99.78%
WW9	SCC01	23,000	0.001	99.9%	197	863	0.20	0.86	0.03	5.91	0.44	1.93	99.78%
WW10	SCC02	34,300	0.001	99.9%	294	1,288	0.29	1.29	0.03	8.82	0.65	2.85	99.78%
WW11	SCC04	27,400	0.001	99.9%	235	1,029	0.23	1.03	0.03	7.05	0.52	2.28	99.78%
WW12													
WW13	CC10	61,000	0.001	99.9%	523	2,290	0.52	2.29	0.03	15.69	3.84	16.82	99.27%
WW14													
WW17													
Total					4,245	18,591	4.24	18.59		127.34	12.06	52.82	

Methodology

*PM10 and PM2.5 emissions assumed equal to PM emissions
Controlled Emissions (lbs/hr) = Air Flow (acfm) * Grain Loading (grains/ascf) * 60 (min/hr) / 7000 (grains/lb)
Controlled Emissions (ton/yr) = Controlled Emissions (lbs/hr) * (8760 hrs/yr) / 2000 (lbs/ton)
Uncontrolled Emissions (lbs/hr) = Controlled Emissions (ton/yr) / (1 - Control Efficiency)
Uncontrolled Emissions (ton/yr) = Uncontrolled Emissions (lbs/hr) * (8760 hrs/yr) / 2000 (lbs/ton)
Limited Particulate Emissions based on 326 IAC 6.5 (lb/hr) = Air Flow (acfm) * Limit (grains/dscf) * 60 (min/hr) / 7000 (grains/lb)
Limited Particulate Emissions based on 326 IAC 6.5 (ton/yr) = Limited Particulate Emissions based on 326 IAC 6.5 (lb/hr) * (8760 hr/yr) / 2000 (lbs/ton)
Uncontrolled Emissions (lbs/hr) = Controlled Emissions (ton/yr) / (1 - Control Efficiency)
PSD Minor PM/PM10/PM2.5 Limited Emissions (tons/yr) = PSD Minor PM/PM10/PM2.5 Limited Emissions (lbs/hr) * (8760 hrs/yr) / 2000 (lbs/ton)
Equivalent Limited Efficiency (%) = 1 - [PSD Minor PM/PM10/PM2.5 Limited Emissions (lbs/hr) / Uncontrolled Emissions (lbs/hr)]

**Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
2-Stroke Lean-Burn (2SLB) Engines**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Maximum Output Horsepower Rating (hp)	43	Unit	Horsepower
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500	EG1	16
Maximum Hours Operated per Year (hr/yr)	500	EG2	27
Potential Fuel Usage (MMBtu/yr)	161	Total	43
High Heat Value (MMBtu/MMscf)	1020		
Potential Fuel Usage (MMcf/yr)	0.16		

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	4.83E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.00	0.00	0.00	0.000	0.26	0.01	0.03

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.
PM2.5 emission factor is filterable PM2.5 + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	7.76E-03	0.001
Acrolein	7.78E-03	0.001
Benzene	1.94E-03	0.000
1,3-Butadiene	8.20E-04	0.000
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.004
Methanol	2.48E-03	0.000
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.000
2,2,4-Trimethylpentane	8.46E-04	0.000
Total PAH**	1.34E-04	0.000
Total		0.01

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)]*[Brake Specific Fuel Consumption (Btu/hp-hr)]*[Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	
Emission Factor in lb/MMCF**			2.2
Potential Emission in tons/yr	8.87	0.10	0.00
Summed Potential Emissions in tons/yr	8.97		
CO2e Total in tons/yr	11.44		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [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

(25) + N2O Potential Emission ton/yr x N2O GWP (298).

Abbreviations

PM = Particulate Matter	NOx = Nitrous Oxides	CO2 = Carbon Dioxide
PM10 = Particulate Matter (<10 um)	VOC = Volatile Organic Compounds	CH4 = Methane
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	N2O = Nitrous Oxide
		CO2e = CO2 equivalent emissions

**Appendix A: Emissions Calculations
Banding Process**

**Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright**

Adhesive Density = 9 lbs/gal

	Max Throughput	Adhesive	Adhesive	VOC	Vinyl acetate	VOC		Vinyl Acetate
	parts/hr	grams/part	gal/part	lb/gal	lb/gal	lbs/hour	tpy	tpy
1	10	5.6	0.0014	0.0834	0.0834	0.001	0.01	0.01
2	10	na	na	0.0834	0.0834	na	na	na
3	240	na	na	0.0834	0.0834	na	na	na
4	200	17	0.0042	0.0834	0.0834	0.07	0.30	0.30
5	200	11.4	0.0028	0.0834	0.0834	0.05	0.20	0.20
6	250	na	na	0.0834	0.0834	na	na	na
7	150	na	na	0.0834	0.0834	na	na	na
8	200	5.6	0.0014	0.0834	0.0834	0.02	0.10	0.10
Total						0.14	0.61	0.61

Methodology

Adhesive (gal/part) = Adhesive (grams/part) * (lb/453.6 grams) / Density (lbs/gal)

Adhesive density is a conservative estimate

VOC (lbs/hour) = Adhesive (gal/part) * parts/hour * VOC Density (lb/gal)

VOC (tpy) = VOC (lb/hour* * 8760 hours/year * ton/2000 lbs

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf		Potential Throughput MMCF/yr				
0.5	1020		4.3				
	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	0.004	0.02	0.02	0.001	0.21	0.01	0.18

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, ChBrian Wrighter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

HAPs - Organics						
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
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	4.5E-06	2.6E-06	1.6E-04	3.9E-03	7.3E-06	4.0E-03

HAPs - Metals						
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
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	1.1E-06	2.4E-06	3.0E-06	8.2E-07	4.5E-06	1.2E-05
					Total HAPs	4.1E-03
					Worst HAP	3.9E-03

Methodology is the same as above.

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

Greenhouse Gas Calculations

Greenhouse Gas			
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	258	0.005	0.005
Summed Potential Emissions in tons/yr	258		
CO2e Total in tons/yr	259		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations

**VOC
Dip Tanks**

Company Name: MasterBrand Cabinets, Inc.
Source Address: 1002 Eisenhower Drive North, Goshen, IN 46526
Permit Number: T039-34286-00014
Reviewer: Brian Wright

Coating	Density (Lb/Gal)	Weight % VOC	% Toluene	% Formaldehyde	gallons per hour	Potential VOC tons per year	Toluene (tons/yr)	Formaldehyde (tons/yr)	Total HAP (tons/yr)
Butyl Acetate	6.8	74.3%	16%	0.02%	0.08	1.67	0.35	0.00	0.35

Methodology

VOC Emissions (tons/yr) = [Gallons per unit] * [Units per Hour] * [Density (lbs/gallon)] * [Weight % VOC] / [2000 lbs/ton] * [8760 hours/yr]

Individual HAP Emissions (tons/yr) = [Gallons per unit] * [Units per Hour] * [Density (lbs/gallon)] * [Weight %HAP] / [2000 lbs/ton] * [8760 hours/yr]

Total HAP = Sum of all individual HAPs

Adhesive (gal/part) = Adhesive (grams/part) * (lb/453.6 grams) / Density (lbs/gal)

Adhesive density is a conservative estimate

VOC (lbs/hour) = Adhesive (gal/part) * parts/hour * VOC Density (lb/gal)

VOC (tpy) = VOC (lb/hour) * 8760 hours/year * ton/2000 lbs



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: John Horwarth
MasterBrand Cabinets, Inc
PO Box 595
Goshen, IN 46527

DATE: December 12, 2014

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

SUBJECT: Final Decision
Title V - Renewal
039-34286-00014

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:
Bart Boeglin (GM)
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 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

December 12, 2014

TO: Goshen Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: MasterBrand Cabinets, Inc.
Permit Number: 039-34286-00014

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	CDENNY 12/12/2014 MasterBrand Cabinets, Inc 039-34286-00014 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		John Horwarth MasterBrand Cabinets, Inc PO Box 595 Goshen IN 46527 (Source CAATS)										
2		Bart Boeglin General Manager MasterBrand Cabinets, Inc PO Box 595 Goshen IN 46527 (RO CAATS)										
3		Elkhart City Council and Mayors Office 229 South Second Street Elkhart IN 46516 (Local Official)										
4		Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 (Health Department)										
5		Goshen City Council and Mayors Office 202 South 5th Street Suite 1 Goshen IN 46528 (Local Official)										
6		Goshen Public Library 601 S 5th St Goshen IN 46526-3994 (Library)										
7		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)										
8		Erin Surinak Environmental Resources Management (ERM) 11350 N Meridian Street Suite 320 Carmel IN 46032 (Consultant)										
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