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

*Mitchell E. Daniels Jr.*
**Governor**

*Thomas W. Easterly*
**Commissioner**

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

TO: Interested Parties / Applicant

DATE: August 20, 2012

RE: Forest River, Inc., Coachmen Division/039-30817-00062

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

# Notice of Decision: Approval – Effective Immediately

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

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

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

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

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

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

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



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

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

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

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

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

Enclosures
FNTVOP.dot12/3/07

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# Part 70 Operating Permit Renewal
# OFFICE OF AIR QUALITY

## Forest River, Inc. Coachmen Division
## 423 North Main
## Middlebury, Indiana 46540

(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.: T039-30817-00062 | |
|---|---|
| Issued by:<br>Jenny Acker<br>Jenny Acker, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: August 20, 2012<br>Expiration Date: August 20, 2022 |

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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 travel trailer, camper, para-transit vehicle, and motor home manufacturing source.

| | |
|---|---|
| Source Address: | 423 North Main, Middlebury, Indiana 46540 |
| General Source Phone Number: | (574)825-8493 |
| SIC Code: | 3792 |
| County Location: | Elkhart |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | Part 70 Operating Permit Program<br>Minor Source, under PSD and Emission Offset Rules<br>Major Source, Section 112 of the Clean Air Act<br>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) One (1) frame spray coating area (Plant 105) used to coat metal, identified as EU12, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame spray coating area, is considered to be a surface coating facility at an existing affected source.

(b) Fourteen (14) thinning and reducing areas (Plants 4, 5, 7, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) used to coat metal, identified as EU14, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, all areas (all plants) exhausted through general ventilation systems. In addition, Plant 105 has two (2) painting booths equipped with air-assisted airless and HVLP spray applicators with dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) thinning and reducing areas, are considered to be surface coating facilities at an existing affected source.

(c) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of caulks and sealants used to coat plastic, wood and metal, identified as EU7, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(d) Fourteen (14) spray coating areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of undercoating metal parts, identified as EU9, installed prior to 1972, equipped with airless or HVLP spray applicators and dry filters for overspray control, all areas exhausted through general building ventilation, capacity: 10.0

vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) spray coating areas, are considered to be surface coating facilities at an existing affected source.

(e) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of general construction adhesives to metal parts, identified as EU3, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310 exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(f) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of plumbing adhesives to plastic parts, identified as EU8, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(g) Fourteen (14) manual product cleaning areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310), for the manual wipe degreasing of plastic and metal product prior to application of decals, identified as EU10, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310, exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) manual product cleaning areas, are considered to be surface coating facilities at an existing affected source.

(h) One (1) frame coating paint spray booth, identified as 220-01, installed in 2003, using a black HAPs-free enamel coating in Plant 7 used to coat metal parts, equipped with HVLP applicators and dry filters for overspray control, exhausted to stack S9, capacity: 1.00 vehicle per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame coating paint spray booth, is considered to be a surface coating facility at an existing affected source.

(i) One (1) spray booth used to coat metal parts, identified as Plant 250 Touch-Up Repair Booth, installed in 2005, equipped with dry filters for overspray control, exhausted to stack S11, capacity: 0.75 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) spray booth is considered to be a surface coating facility at an existing affected source.

(j) One (1) paint shop, identified as EU1, with three (3) spray booths in Plant 220 used to coat plastic parts, approved for construction in 2007, with a maximum capacity of 0.25 units per hour each, using dry filters to control overspray, and exhausting to stacks S12, S13, and S14. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the three (3) spray booths are considered to be surface coating facilities at an existing affected source.

## A.3 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, T039-30817-00062, 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(34), 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(34).

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(34).

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(34).

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(34).

(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(34).

(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 T039-30817-00062 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

(1) That this permit contains a material mistake.

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

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

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

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

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(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(34).

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

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

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

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

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

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

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

C.7 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(34).

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(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(34).

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

**Compliance Requirements [326 IAC 2-1.1-11]**

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

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

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

C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

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

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

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

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

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

C.13 Risk Management Plan [326 IAC 2-7-5(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.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(34).

**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]

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:

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

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

The statement must be submitted to:

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

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

Records of required monitoring information include the following:

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

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

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

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

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

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

**Stratospheric Ozone Protection**

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

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

## SECTION D.1 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(14)]: Surface Coating Operations**

(a) One (1) frame spray coating area (Plant 105) used to coat metal, identified as EU12, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame spray coating area, is considered to be a surface coating facility at an existing affected source.

(b) Fourteen (14) thinning and reducing areas (Plants 4, 5, 7, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) used to coat metal, identified as EU14, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, all areas (all plants) exhausted through general ventilation systems. In addition, Plant 105 has two (2) painting booths equipped with air-assisted airless and HVLP spray applicators with dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) thinning and reducing areas, are considered to be surface coating facilities at an existing affected source.

(c) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of caulks and sealants used to coat plastic, wood and metal, identified as EU7, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(d) Fourteen (14) spray coating areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of undercoating metal parts, identified as EU9, installed prior to 1972, equipped with airless or HVLP spray applicators and dry filters for overspray control, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) spray coating areas, are considered to be surface coating facilities at an existing affected source.

(e) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of general construction adhesives to metal parts, identified as EU3, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310 exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(f) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of plumbing adhesives to plastic parts, identified as EU8, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(g) Fourteen (14) manual product cleaning areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310), for the manual wipe degreasing of plastic and metal product prior to application of decals, identified as EU10, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310, exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) manual product cleaning areas, are considered to be surface coating facilities at an existing affected source.

(h) One (1) frame coating paint spray booth, identified as 220-01, installed in 2003, using a black HAPs-free enamel coating in Plant 7 used to coat metal parts, equipped with HVLP applicators and dry filters for overspray control, exhausted to stack S9, capacity: 1.00 vehicle per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame coating paint spray booth, is considered to be a surface coating facility at an existing affected source.

(i) One (1) spray booth used to coat metal parts, identified as Plant 250 Touch-Up Repair Booth, installed in 2005, equipped with dry filters for overspray control, exhausted to stack S11, capacity: 0.75 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) spray booth is considered to be a surface coating facility at an existing affected source.

(j) One (1) paint shop, identified as EU1, with three (3) spray booths in Plant 220 used to coat plastic parts, approved for construction in 2007, with a maximum capacity of 0.25 units per hour each, using dry filters to control overspray, and exhausting to stacks S12, S13, and S14. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the three (3) spray booths are considered to be surface coating facilities 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.1.1 Volatile Organic Compounds (VOC) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the volatile organic compound (VOC) delivered to the applicators including clean-up solvents at the entire source including all insignificant activities shall not exceed 247 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limit, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

D.1.2 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9, the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of three and five-tenths (3.5) pounds per gallon of coating, excluding water, as delivered to the applicator, when coating metal in the fourteen (14) assembly areas for caulks and sealants, the fourteen (14) spray coating areas of undercoating, the one (1) frame spray coating area, the fourteen (14) thinning and reducing areas, and the frame coating paint spray booth, identified as EU7, EU9, EU12, EU14 and 220-01, respectively.

(b) Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

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

Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) frame spray coating area, the fourteen (14) thinning and reducing areas, the fourteen (14) spray coating areas for the application of undercoating, the one (1) frame coating paint spray booth, the one (1) spray booth, identified as EU12, EU14, EU9, 220-01, and Plant 250 Touch-Up Repair Booth, and the three (3) spray booths in paint shop EU1, shall each be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.1.4 Volatile Organic Compound (VOC) Emission Limit [326 IAC 8-1-6]

The volatile organic compound (VOC) delivered to the applicators including clean-up solvents for each of the three spray booths in the paint shop in Plant 220, identified as EU1, shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this limit renders the requirements of 326 IAC 8-1-6 (BACT) not applicable.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility. Section B - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

**Compliance Determination Requirements**

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Compliance with the VOC content limit in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings, used to coat metals, on a daily basis. This volume weighted average shall be determined by the following equation:

$$\frac{\sum_{c=1}^{c=n} \text{coating } c \text{ (gal/day)} \times \text{VOC content of } c \text{ (lbs/gal, less water)}}{\sum_{c=1}^{c=n} \text{coating } c \text{ (gal/day)}}$$

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

The compliance status with the VOC content and usage limitations contained in Conditions D.1.1, D.1.2, and D.1.4 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. 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.1.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray exhaust from the one (1) frame spray coating area, the one (1) frame coating paint spray booth, the one (1) spray booth, identified as EU12, EU14, EU9, 220-01, and Plant 250 Touch-Up Repair Booth, and the three (3) spray booths in paint shop EU1, respectively, while one or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take a 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.

(b) Monthly inspections shall be performed of the coating emissions from the exhaust and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emission is observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, D.1.2, and D.1.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1), (2), (4), and (5) shall be taken monthly and (3) taken daily and shall be complete and sufficient to establish compliance with the VOC content limits and the VOC emission limits established in Conditions D.1.1, D.1.2, and D.1.4.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on 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 volume weighted VOC content of the coatings used for each day;

(4) The cleanup solvent usage for each month; and

(5) The total VOC usage for each day and month.

(b) To document the compliance status with Condition D.1.7, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections. The Permittee shall include in its record when an inspection or observation is not taken and the reason for lack of inspection or observation (e.g., the process did not operate that day, week, or month).

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

D.1.10 Reporting Requirements

The Permittee shall submit a quarterly summary of the information to document the compliance status with Condition D.1.1 and D.1.4. These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(34).

## SECTION D.2 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(14)]: Insignificant Woodworking**

Eight (8) woodworking areas (Plants 4, 7, 110, 201, 205, 210, 220, and 310), identified as EU16, with particulate for each area controlled by a cyclone and baghouse, exhaust through general building ventilation and having $PM/PM_{10}$ emissions less than five (5) pounds per hour and twenty-five (25) pounds per day, total. [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 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the insignificant woodworking, identified as EU16, shall not exceed the allowable emission rate of particulate as determined 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:

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

**SECTION E.1 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(14)]: Surface Coating Operations**

(a) One (1) frame spray coating area (Plant 105) used to coat metal, identified as EU12, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame spray coating area, is considered to be a surface coating facility at an existing affected source.

(b) Fourteen (14) thinning and reducing areas (Plants 4, 5, 7, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) used to coat metal, identified as EU14, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, all areas (all plants) exhausted through general ventilation systems. In addition, Plant 105 has two (2) painting booths equipped with air-assisted airless and HVLP spray applicators with dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) thinning and reducing areas, are considered to be surface coating facilities at an existing affected source.

(c) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of caulks and sealants used to coat plastic, wood and metal, identified as EU7, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(d) Fourteen (14) spray coating areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of undercoating metal parts, identified as EU9, installed prior to 1972, equipped with airless or HVLP spray applicators and dry filters for overspray control, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) spray coating areas, are considered to be surface coating facilities at an existing affected source.

(e) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of general construction adhesives to metal parts, identified as EU3, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310 exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(f) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of plumbing adhesives to plastic parts, identified as EU8, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(g) Fourteen (14) manual product cleaning areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310), for the manual wipe degreasing of plastic and metal product prior to application of decals, identified as EU10, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310, exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) manual product cleaning areas, are considered to be surface coating facilities at an existing affected source.

(h) One (1) frame coating paint spray booth, identified as 220-01, installed in 2003, using a black HAPs-free enamel coating in Plant 7 used to coat metal parts, equipped with HVLP applicators and dry filters for overspray control, exhausted to stack S9, capacity: 1.00 vehicle per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame coating paint spray booth, is considered to be a surface coating facility at an existing affected source.

(i) One (1) spray booth used to coat metal parts, identified as Plant 250 Touch-Up Repair Booth, installed in 2005, equipped with dry filters for overspray control, exhausted to stack S11, capacity: 0.75 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) spray booth is considered to be a surface coating facility at an existing affected source.

(j) One (1) paint shop, identified as EU1, with three (3) spray booths in Plant 220 used to coat plastic parts, approved for construction in 2007, with a maximum capacity of 0.25 units per hour each, using dry filters to control overspray, and exhausting to stacks S12, S13, and S14. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the three (3) spray booths are considered to be surface coating facilities 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.1.1 General Provisions Relating to NESHAP Subpart PPPP [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.4501, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 2 of 40 CFR 63, Subpart PPPP in accordance with the schedule in 40 CFR 63, Subpart PPPP.

E.1.2 Surface Coating of Plastic Parts and Products NESHAP [40 CFR Part 63, Subpart PPPP] [326 IAC 20-81]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart PPPP, which is incorporated by reference as 326 IAC 20-81 (included as Attachment A of this permit):

(a) 40 CFR 63.4480

(b) 40 CFR 63.4481 (a)(1) and (5), (b), (e)(1)

(c) 40 CFR 63.4482 (a), (b), and (e)

(d) 40 CFR 63.4483 (b) and (d)

(e) 40 CFR 63.4490 (b)(4)

(f) 40 CFR 63.4491 (a) and (b)

(g) 40 CFR 63.4492 (a)

(h) 40 CFR 63.4493 (a)

(i) 40 CFR 63.4500 (a)(1), (b)

(j) 40 CFR 63.4501

(k) 40 CFR 63.4510 (a), (b), (c)(1) through (7), 8(i) and (ii)

(l) 40 CFR 63.4520 (a) (1) through (3)(i) through (v), (4) through (6)

(m) 40 CFR 63.4530 (a), (b), (c) (1) through (3), (d) through (h)

(n) 40 CFR 63.4531

(o) 40 CFR 63.4540

(p) 40 CFR 63.4541

(q) 40 CFR 63.4542

(r) 40 CFR 63.4550

(s) 40 CFR 63.4551

(t) 40 CFR 63.4552

(u) 40 CFR 63.4580

(v) 40 CFR 63.4581

(w) Table 2 to Subpart PPPP of Part 63

(x) Table 3 to Subpart PPPP of Part 63

(y) Table 4 to Subpart PPPP of Part 63

(z) Appendix A to Subpart PPPP of Part 63

**SECTION E.2 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(14)]: Surface Coating Operations**

(a) One (1) frame spray coating area (Plant 105) used to coat metal, identified as EU12, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame spray coating area, is considered to be a surface coating facility at an existing affected source.

(b) Fourteen (14) thinning and reducing areas (Plants 4, 5, 7, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) used to coat metal, identified as EU14, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, all areas (all plants) exhausted through general ventilation systems. In addition, Plant 105 has two (2) painting booths equipped with air-assisted airless and HVLP spray applicators with dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) thinning and reducing areas, are considered to be surface coating facilities at an existing affected source.

(c) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of caulks and sealants used to coat plastic, wood and metal, identified as EU7, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(d) Fourteen (14) spray coating areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of undercoating metal parts, identified as EU9, installed prior to 1972, equipped with airless or HVLP spray applicators and dry filters for overspray control, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) spray coating areas, are considered to be surface coating facilities at an existing affected source.

(e) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of general construction adhesives to metal parts, identified as EU3, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310 exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(f) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of plumbing adhesives to plastic parts, identified as EU8, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(g) Fourteen (14) manual product cleaning areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310), for the manual wipe degreasing of plastic and metal product prior to application of decals, identified as EU10, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310, exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) manual product cleaning areas, are considered to be surface coating facilities at an existing affected source.

(h) One (1) frame coating paint spray booth, identified as 220-01, installed in 2003, using a black HAPs-free enamel coating in Plant 7 used to coat metal parts, equipped with HVLP applicators and dry filters for overspray control, exhausted to stack S9, capacity: 1.00 vehicle per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame coating paint spray booth, is considered to be a surface coating facility at an existing affected source.

(i) One (1) spray booth used to coat metal parts, identified as Plant 250 Touch-Up Repair Booth, installed in 2005, equipped with dry filters for overspray control, exhausted to stack S11, capacity: 0.75 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) spray booth is considered to be a surface coating facility at an existing affected source.

(j) One (1) paint shop, identified as EU1, with three (3) spray booths in Plant 220 used to coat plastic parts, approved for construction in 2007, with a maximum capacity of 0.25 units per hour each, using dry filters to control overspray, and exhausting to stacks S12, S13, and S14. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the three (3) spray booths are considered to be surface coating facilities 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.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63, Subpart MMMM [40 CFR Part 63, Subpart A]

Pursuant to 63.3880, the Permittee shall comply with the provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the above mentioned facilities, except when otherwise specified in 40 CFR 63, Subpart MMMM. in accordance with the schedule in 40 CFR 63, Subpart MMMM.

E.1.2 National Emission Standards for Hazardous Air Pollutants for Surface Coating of Metal Parts and Products [40 CFR 63, Subpart MMMM]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart MMMM, which is incorporated by reference as 326 IAC 20-81 (included as Attachment B of this permit):

(1) NESHAP Subpart MMMM requirements for existing affected sources have been incorporated (except for the provisions that apply only to solvent recovery and magnet wire coating units that do not exist at the Source), at the request of the Permittee. The Permittee has chosen to comply with the requirements through compliance with 40 CFR 63, Subpart PPPP which is allowed because more than 90% of the operation (predominant activity) is surface coating of plastic parts, pursuant to:

(A) 40 CFR 63.3881 (c)(16); and

(B) 40 CFR 63.3881 (e)(2).

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

Source Name: Forest River, Inc. Coachmen Division
Source Address: 423 North Main, Middlebury, Indiana 46540
Part 70 Permit No.: T039-30817-00062

**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: Forest River, Inc. Coachmen Division
Source Address: 423 North Main, Middlebury, Indiana 46540
Part 70 Permit No.: T039-30817-00062

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

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

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

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

# Part 70 Quarterly Report

Source Name: Forest River, Inc. Coachmen Division
Source Address: 423 North Main Street, Middlebury, IN, Indiana 46540
Part 70 Permit No.: T039-30817-00062
Facility: Entire Source
Parameter: Total VOC input, including clean-up solvents, from the entire source
Limit: Shall not exceed 247 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 |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

☐ No deviation occurred in this quarter.

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

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

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

# Part 70 Quarterly Report

Source Name: Forest River, Inc. Coachmen Division
Source Address: 423 North Main Street, Middlebury, IN, Indiana 46540
Part 70 Permit No.: T039-30817-00062
Facility: The three (3) spray booths in paint shop EU1
Parameter: Total VOC input, including clean-up solvents, from each booth
Limit: Shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month for each spray booth.

QUARTER : YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Source Name: Forest River, Inc. Coachmen Division
Source Address: 423 North Main, Middlebury, Indiana 46540
Part 70 Permit No.: T039-30817-00062

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

Page 1 of 2

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

# Attachment A
# To Part 70 Operating Permit Renewal No.: T039-30817-00062

## Title 40: Protection of Environment
### Subpart PPPP—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products

**Source:** 69 FR 20990, Apr. 19, 2004, unless otherwise noted.

**What This Subpart Covers**

**§ 63.4480 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for plastic parts and products surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

**§ 63.4481 Am I subject to this subpart?**

(a) Plastic parts and products include, but are not limited to, plastic components of the following types of products as well as the products themselves: Motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; sporting and recreational goods; toys; business machines; laboratory and medical equipment; and household and other consumer products. Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the surface coating of any plastic parts or products, as described in paragraph (a)(1) of this section, and it includes the subcategories listed in paragraphs (a)(2) through (5) of this section.

(1) Surface coating is the application of coating to a substrate using, for example, spray guns or dip tanks. When application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these activities do not comprise surface coating if they are not directly related to the application of the coating. Coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart.

(2) The general use coating subcategory includes all surface coating operations that are not automotive lamp coating operations, thermoplastic olefin (TPO) coating operations, or assembled on-road vehicle coating operations.

(3) The automotive lamp coating subcategory includes the surface coating of plastic components of the body of an exterior automotive lamp including, but not limited to, headlamps, tail lamps, turn signals, and marker (clearance) lamps; typical coatings used are reflective argent coatings and clear topcoats. This subcategory does not include the coating of interior automotive lamps, such as dome lamps and instrument panel lamps.

(4) The TPO coating subcategory includes the surface coating of TPO substrates; typical coatings used are adhesion promoters, color coatings, clear coatings and topcoats. The coating of TPO substrates on fully assembled on-road vehicles is not included in the TPO coating subcategory.

(5) The assembled on-road vehicle coating subcategory includes surface coating of fully assembled motor vehicles and trailers intended for on-road use, including, but not limited to: automobiles, light-duty trucks, heavy duty trucks, and busses that have been repaired after a collision or otherwise repainted; fleet delivery trucks; and motor homes and other recreational vehicles (including camping trailers and fifth wheels). This subcategory also includes the incidental coating of parts, such as radiator grilles, that are removed from the fully assembled on-road vehicle to facilitate concurrent coating of all parts associated with the vehicle. The assembled on-road vehicle coating subcategory does not include the surface coating of plastic parts prior to their attachment to an on-road vehicle on an original equipment manufacturer's (OEM) assembly line. The assembled on-road vehicle coating subcategory also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles. Body fillers used to correct small surface defects and rubbing compounds used to remove surface scratches are not considered coatings subject to this subpart.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.4482, that uses 378 liters (100 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of plastic parts and products defined in paragraph (a) of this section; and that is a major source, is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is any stationary source or group of stationary sources located 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 (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You do not need to include coatings that meet the definition of non-HAP coating contained in §63.4581 in determining whether you use 378 liters (100 gallons) per year, or more, of coatings in the surface coating of plastic parts and products.

(c) This subpart does not apply to surface coating or a coating operation that meets any of the criteria of paragraphs (c)(1) through (17) of this section.

(1) A coating operation conducted at a facility where the facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP, as determined according to §63.3941(a).

(2) Surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building, and facility maintenance operations, or that occur at hobby shops that are operated for noncommercial purposes.

(3) The surface coating of plastic parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).

(4) Surface coating where plastic is extruded onto plastic parts or products to form a coating.

(5) Surface coating of magnet wire.

(6) In-mold coating operations or gel coating operations in the manufacture of reinforced plastic composite parts that meet the applicability criteria for reinforced plastics composites production (subpart WWWW of this part).

(7) Surface coating of plastic components of wood furniture that meet the applicability criteria for wood furniture manufacturing (subpart JJ of this part).

(8) Surface coating of plastic components of large appliances that meet the applicability criteria for large appliance surface coating (subpart NNNN of this part).

(9) Surface coating of plastic components of metal furniture that meet the applicability criteria for metal furniture surface coating (subpart RRRR of this part).

(10) Surface coating of plastic components of wood building products that meet the applicability criteria for wood building products surface coating (subpart QQQQ of this part).

(11) Surface coating of plastic components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).

(12) Surface coating of plastic parts intended for use in an aerospace vehicle or component using specialty coatings as defined in appendix A to subpart GG of this part.

(13) Surface coating of plastic components of ships that meet the applicability criteria for shipbuilding and ship repair (subpart II of this part).

(14) Surface coating of plastic using a web coating process that meets the applicability criteria for paper and other web coating (subpart JJJJ of this part).

(15) Surface coating of fiberglass boats or parts of fiberglass boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing (subpart VVVV of this part), except

where the surface coating of the boat is a post-mold coating operation performed on personal watercraft or parts of personal watercraft. This subpart does apply to post-mold coating operations performed on personal watercraft and parts of personal watercraft.

(16) Surface coating of plastic components of automobiles and light-duty trucks that meet the applicability criteria in §63.3082(b) of the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) at a facility that meets the applicability criteria in §63.3081(b).

(17) Screen printing.

(d) If your facility meets the applicability criteria in §63.3081(b) of the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) and you perform surface coating of plastic parts or products that meets both the applicability criteria in §63.3082(c) and the applicability criteria of this subpart, then for the surface coating of any or all of your plastic parts or products that meets the applicability criteria in §63.3082(c), you may choose to comply with the requirements of subpart IIII of this part in lieu of complying with this subpart. Surface coating operations on plastic parts or products (e.g., parts for motorcycles or lawnmowers) not intended for use in automobiles, light-duty trucks, or other motor vehicles as defined in §63.3176 cannot be made part of your affected source under subpart IIII of this part.

(e) If you own or operate an affected source that meets the applicability criteria of this subpart and at the same facility you also perform surface coating that meets the applicability criteria of any other final surface coating NESHAP in this part, you may choose to comply as specified in paragraph (e)(1), (2), or (3) of this section.

(1) You may have each surface coating operation that meets the applicability criteria of a separate NESHAP comply with that NESHAP separately.

(2) You may comply with the emission limitation representing the predominant surface coating activity at your facility, as determined according to paragraphs (e)(2)(i) and (ii) of this section. However, you may not establish assembled on-road vehicle or automotive lamp coating operations as the predominant activity. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining the predominant surface coating activity at your facility.

(i) If a surface coating operation accounts for 90 percent or more of the surface coating activity at your facility (that is, the predominant activity), then compliance with the emission limitations of the predominant activity for all surface coating operations constitutes compliance with these and other applicable surface coating NESHAP. In determining predominant activity, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(ii) You must use kilogram (kg) (pound (lb)) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative mass of coating solids used from parameters other than coating consumption and mass solids content (e.g., design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and mass solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.4510(b). You must also determine predominant activity annually and include the determination in the next semi-annual compliance report required by §63.4520(a).

(3) You may comply with a facility-specific emission limit calculated from the relative amount of coating activity that is subject to each emission limit. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this subpart and other applicable surface coating NESHAP. The procedures for calculating the facility-specific emission limit are specified in §63.4490. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. You must not consider any surface coating activity that is

subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining a facility-specific emission limit for your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the calculation of the facility-specific emission limit but must be included in the compliance calculations.

[69 FR 20990, Apr. 19, 2004, as amended at 69 FR 22660, April 26, 2004; 71 FR 76927, Dec. 22, 2006; 72 FR 20237, Apr. 24, 2007]

**§ 63.4482 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new, reconstructed, and existing affected source within each of the four subcategories listed in §63.4481(a).

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of plastic parts and products within each subcategory.

(1) All coating operations as defined in §63.4581;

(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(c) An affected source is a new source if it meets the criteria in paragraph (c)(1) of this section and the criteria in either paragraph (c)(2) or (3) of this section.

(1) You commenced the construction of the source after December 4, 2002 by installing new coating equipment.

(2) The new coating equipment is used to coat plastic parts and products at a source where no plastic parts surface coating was previously performed.

(3) The new coating equipment is used to perform plastic parts and products coating in a subcategory that was not previously performed.

(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.

**§ 63.4483 When do I have to comply with this subpart?**

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) through (c) of this section. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in §§63.4540, 63.4550, and 63.4560.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is before April 19, 2004, the compliance date is April 19, 2004.

(2) If the initial startup of your new or reconstructed affected source occurs after April 19, 2004, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is the date 3 years after April 19, 2004.

(c) For an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP emissions, the compliance date is specified in paragraphs (c)(1) and (2) of this section.

(1) For any portion of the source that becomes a new or reconstructed affected source subject to this subpart, the compliance date is the date of initial startup of the affected source or April 19, 2004, whichever is later.

(2) For any portion of the source that becomes an existing affected source subject to this subpart, the compliance date is the date 1 year after the area source becomes a major source or 3 years after April 19, 2004, whichever is later.

(d) You must meet the notification requirements in §63.4510 according to the dates specified in that section and in subpart A of this part. Some of the notifications must be submitted before the compliance dates described in paragraphs (a) through (c) of this section.

**Emission Limitations**

**§ 63.4490 What emission limits must I meet?**

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (a)(1) through (4) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.4541, §63.4551, or §63.4561.

(1) For each new general use coating affected source, limit organic HAP emissions to no more than 0.16 kg (0.16 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(2) For each new automotive lamp coating affected source, limit organic HAP emissions to no more than 0.26 kg (0.26 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(3) For each new TPO coating affected source, limit organic HAP emissions to no more than 0.22 kg (0.22 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(4) For each new assembled on-road vehicle coating affected source, limit organic HAP emissions to no more than 1.34 kg (1.34 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (b)(1) through (4) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.4541, §63.4551, or §63.4561.

(1) For each existing general use coating affected source, limit organic HAP emissions to no more than 0.16 kg (0.16 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(2) For each existing automotive lamp coating affected source, limit organic HAP emissions to no more than 0.45 kg (0.45 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(3) For each existing TPO coating affected source, limit organic HAP emissions to no more than 0.26 kg (0.26 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(4) For each existing assembled on-road vehicle coating affected source, limit organic HAP emissions to no more than 1.34 kg (1.34 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(c) If your facility's surface coating operations meet the applicability criteria of more than one of the subcategory emission limits specified in paragraphs (a) or (b) of this section, you may comply separately with each subcategory emission limit or comply using one of the alternatives in paragraph (c)(1) or (2) of this section.

(1) If the general use or TPO surface coating operations subject to only one of the emission limits specified in paragraphs (a)(1), (a)(3), (b)(1), or (b)(3) of this section account for 90 percent or more of the surface coating activity at your facility ( *i.e.,* it is the predominant activity at your facility), then compliance with that emission limitation for all surface coating operations constitutes compliance with the other applicable emission limitations. You must use kg (lb) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative mass of coating solids used from parameters other than coating consumption and mass solids content (e.g*.,* design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and mass solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.4510(b). Additionally, you must determine the facility's predominant activity annually and include the determination in the next semi-annual compliance report required by §63.4520(a).

(2) You may calculate and comply with a facility-specific emission limit as described in paragraphs (c)(2)(i) through (iii) of this section. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of the other subcategories and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(i) You are required to calculate the facility-specific emission limit for your facility when you submit the notification of compliance status required in §63.4510(c), and on a monthly basis afterward using the coating data for the relevant 12-month compliance period.

(ii) Use Equation 1 of this section to calculate the facility-specific emission limit for your surface coating operations for each 12-month compliance period.

$$Facility-Specific\ \text{Emission Limit} = \frac{\sum_{i=1}^{n}(\text{Limit}_i)(Solids_i)}{\sum_{i=1}^{n}(Solids_i)} \qquad (Eq.\ 1)$$

Where:

Facility-specific emission limit = Facility-specific emission limit for each 12-month compliance period, kg (lb) organic HAP per kg (lb) coating solids used.

$\text{Limit}_i$= The new source or existing source emission limit applicable to coating operation, i, included in the facility-specific emission limit, converted to kg (lb) organic HAP per kg (lb) coating solids used, if the emission limit is not already in those units. All emission limits included in the facility-specific emission limit must be in the same units.

$\text{Solids}_i$= The kg (lb) of solids used in coating operation, i, in the 12-month compliance period that is subject to emission limit, i. You may estimate the mass of coating solids used from parameters other than coating consumption and mass solids content (e.g*.,* design specifications for the parts or products coated and the number of items produced). The use of parameters other than coating consumption and mass solids content must be approved by the Administrator.

n = The number of different coating operations included in the facility-specific emission limit.

(iii) If you need to convert an emission limit in another surface coating NESHAP from kg (lb) organic HAP per liter (gallon) coating solids used to kg (lb) organic HAP per kg (lb) coating solids used, you must use the default solids density of 1.50 kg solids per liter coating solids (12.5 lb solids per gal solids).

**§ 63.4491 What are my options for meeting the emission limits?**

You must include all coatings (as defined in §63.4581), thinners and/or other additives, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in §63.4490. To make this determination, you must use at least one of the three compliance options listed in paragraphs (a) through (c) of this section. You may apply any of the compliance options to an individual coating operation, or to multiple coating operations as a group, or to the entire affected source. You may use different compliance options for different coating operations, or at different times on the same coating operation. You may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by §63.4530(c), and you must report it in the next semiannual compliance report required in §63.4520.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in §63.4490, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. You must meet all the requirements of §§63.4540, 63.4541, and 63.4542 to demonstrate compliance with the applicable emission limit using this option.

(b) *Emission rate without add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.4490, calculated as a rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§63.4550, 63.4551, and 63.4552 to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), and the emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.4490, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in §63.4492, except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j), and that you meet the work practice standards required in §63.4493. You must meet all the requirements of §§63.4560 through 63.4568 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

**§ 63.4492 What operating limits must I meet?**

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation(s) on which you use the emission rate with add-on controls option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to §63.4561(j), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in §63.4567. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under §63.8(f).

**§ 63.4493 What work practice standards must I meet?**

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any work practice standards.

(b) If you use the emission rate with add-on controls option, you must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners and/or other additives, and cleaning materials used in, and waste materials generated by the controlled coating operation(s) for which you use this option; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

(1) All organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be stored in closed containers.

(2) Spills of organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be minimized.

(3) Organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.

(4) Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.

(5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

(c) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the work practice standards in this section.

**General Compliance Requirements**

**§ 63.4500 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations in this subpart as specified in paragraphs (a)(1) and (2) of this section.

(1) Any coating operation(s) for which you use the compliant material option or the emission rate without add-on controls option, as specified in §63.4491(a) and (b), must be in compliance with the applicable emission limit in §63.4490 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in §63.4491(c), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in §63.4490 at all times except during periods of startup, shutdown, and malfunction.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by §63.4492 at all times except during periods of startup, shutdown, and malfunction, and except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j).

(iii) The coating operation(s) must be in compliance with the work practice standards in §63.4493 at all times.

(b) You must always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in §63.6(e)(1)(i).

(c) If your affected source uses an emission capture system and add-on control device, you must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The plan must address the startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

[69 FR 20990, Apr. 19, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

**§ 63.4501 What parts of the General Provisions apply to me?**

Table 2 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

**Notifications, Reports, and Records**

**§ 63.4510 What notifications must I submit?**

(a) *General.* You must submit the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to you by the dates specified in those sections, except as provided in paragraphs (b) and (c) of this section.

(b) *Initial notification.* You must submit the initial notification required by §63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after April 19, 2004, whichever is later. For an existing affected source, you must submit the initial notification no later than 1 year after April 19, 2004. If you are using compliance with the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (subpart IIII of this part) as provided for under §63.4481(d) to constitute compliance with this subpart for any or all of your plastic parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those plastic parts coating operations. If you are complying with another NESHAP that constitutes the predominant activity at your facility under §63.4481(e)(2) to constitute compliance with this subpart for your plastic parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those plastic parts coating operations.

(c) *Notification of compliance status.* You must submit the notification of compliance status required by §63.9(h) no later than 30 calendar days following the end of the initial compliance period described in §63.4540, §63.4550, or §63.4560 that applies to your affected source. The notification of compliance status must contain the information specified in paragraphs (c)(1) through (11) of this section and in §63.9(h).

(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 the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in §63.4540, §63.4550, or §63.4560 that applies to your affected source.

(4) Identification of the compliance option or options specified in §63.4491 that you used on each coating operation in the affected source during the initial compliance period.

(5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

(6) If you had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of this section.

(i) A description and statement of the cause of the deviation.

(ii) If you failed to meet the applicable emission limit in §63.4490, include all the calculations you used to determine the kg (lb) organic HAP emitted per kg (lb) coating solids used. You do not need to submit information provided by the materials' suppliers or manufacturers, or test reports.

(7) For each of the data items listed in paragraphs (c)(7)(i) through (iv) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data may include a copy of the information provided by the supplier or manufacturer of the example coating or material, or a summary of the results of testing conducted according to §63.4541(a), (b), or (c). You do not need to submit copies of any test reports.

(i) Mass fraction of organic HAP for one coating, for one thinner and/or other additive, and for one cleaning material.

(ii) Mass fraction of coating solids for one coating.

(iii) Density for one coating, one thinner and/or other additive, and one cleaning material, except that if you use the compliant material option, only the example coating density is required.

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of §63.4551.

(8) The calculation of kg (lb) organic HAP emitted per kg (lb) coating solids used for the compliance option(s) you used, as specified in paragraphs (c)(8)(i) through (iii) of this section.

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 1 of §63.4541.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month; the calculation of the total mass of coating solids used each month; and the calculation of the 12-month organic HAP emission rate using Equations 1 and 1A through 1C, 2, and 3, respectively, of §63.4551.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month, using Equations 1 and 1A through 1C of §63.4551; the calculation of the total mass of coating solids used each month using Equation 2 of §63.4551; the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.4561 and Equations 2, 3, and 3A through 3C of §63.4561, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.4561; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.4561.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section, except that the requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

(ii) A summary of the results of each add-on control device performance test. You do not need to submit complete test reports.

(iii) A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

(iv) A statement of whether or not you developed and implemented the work practice plan required by §63.4493.

(10) If you are complying with a single emission limit representing the predominant activity under §63.4490(c)(1), include the calculations and supporting information used to demonstrate that this emission limit represents the predominant activity as specified in §63.4490(c)(1).

(11) If you are complying with a facility-specific emission limit under §63.4490(c)(2), include the calculation of the facility-specific emission limit and any supporting information as specified in §63.4490(c)(2).

[69 FR 20990, Apr. 19, 2004, as amended at 69 FR 22661, Apr. 26, 2004]

**§ 63.4520 What reports must I submit?**

(a) *Semiannual compliance reports.* You must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (7) of this section. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(2) of this section.

(1) *Dates.* Unless the Administrator has approved or agreed to a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in §63.4540, §63.4550, or §63.4560 that applies to your affected source and ends on June 30 or December 31, whichever date is the first date following the end of the initial compliance period.

(ii) Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iii) Each semiannual 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.

(iv) 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 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 date specified in paragraph (a)(1)(iii) of this section.

(2) *Inclusion with title V report.* 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 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section 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 semiannual compliance report includes all required information concerning deviations from any emission limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(3) *General requirements.* The semiannual compliance report must contain the information specified in paragraphs (a)(3)(i) through (vii) of this section, and the information specified in paragraphs (a)(4) through (7) and (c)(1) of this section that is applicable to your affected source.

(i) Company name and address.

(ii) 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.

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(iv) Identification of the compliance option or options specified in §63.4491 that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates for each option you used.

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls compliance option (§63.4491(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(vi) If you used the predominant activity alternative (§63.4490(c)(1)), include the annual determination of predominant activity if it was not included in the previous semi-annual compliance report.

(vii) If you used the facility-specific emission limit alternative (§63.4490(c)(2)), include the calculation of the facility-specific emission limit for each 12-month compliance period during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§63.4490, 63.4492, and 63.4493 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out-of-control as specified in §63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out-of-control during the reporting period.

(5) *Deviations: Compliant material option.* If you used the compliant material option and there was a deviation from the applicable organic HAP content requirements in §63.4490, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

(i) Identification of each coating used that deviated from the applicable emission limit, and each thinner and/or other additive, and cleaning material used that contained organic HAP, and the dates and time periods each was used.

(ii) The calculation of the organic HAP content (using Equation 1 of §63.4541) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (e.g*.,* information provided by coating suppliers or manufacturers, or test reports).

(iii) The determination of mass fraction of organic HAP for each thinner and/or other additive, and cleaning material identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (e.g*.,* information provided by material suppliers or manufacturers, or test reports).

(iv) A statement of the cause of each deviation.

(6) *Deviations: Emission rate without add-on controls option.* If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in §63.4490, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.4490.

(ii) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A through 1C, 2, and 3 of §63.4551; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4). You do not need to submit background data supporting these calculations (e.g*.,* information provided by materials suppliers or manufacturers, or test reports).

(iii) A statement of the cause of each deviation.

(7) *Deviations: Emission rate with add-on controls option.* If you used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in

paragraphs (a)(7)(i) through (xiv) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.4490.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.4551; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4); the calculation of the total mass of coating solids used each month using Equation 2 of §63.4551; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.4561, and Equations 2, 3, and 3A through 3C of §63.4561, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.4561; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.4561. You do not need to submit the background data supporting these calculations (e.g*.,* information provided by materials suppliers or manufacturers, or test reports).

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

(iv) A brief description of the CPMS.

(v) The date of the latest CPMS certification or audit.

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

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

(viii) The date and time period of each deviation from an operating limit in Table 1 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 1 to this subpart and each bypass of the add-on control device during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 1 of this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(xi) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

(xii) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.

(xiii) For each deviation from the work practice standards, a description of the deviation, the date and time period of the deviation, and the actions you took to correct the deviation.

(xiv) A statement of the cause of each deviation.

(b) *Performance test reports.* If you use the emission rate with add-on controls option, you must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in §63.10(d)(2).

(c) *Startup, shutdown, malfunction reports.* If you used the emission rate with add-on controls option and you had a startup, shutdown, or malfunction during the semiannual reporting period, you must submit the reports specified in paragraphs (c)(1) and (2) of this section.

(1) If your actions were consistent with your startup, shutdown, and malfunction plan, you must include the information specified in §63.10(d) in the semiannual compliance report required by paragraph (a) of this section.

(2) If your actions were not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report as described in paragraphs (c)(2)(i) and (ii) of this section.

(i) You must describe the actions taken during the event in a report delivered by facsimile, telephone, or other means to the Administrator within 2 working days after starting actions that are inconsistent with the plan.

(ii) You must submit a letter to the Administrator within 7 working days after the end of the event, unless you have made alternative arrangements with the Administrator as specified in §63.10(d)(5)(ii). The letter must contain the information specified in §63.10(d)(5)(ii).

**§ 63.4530 What records must I keep?**

You must collect and keep records of the data and information specified in this section. Failure to collect and keep these records is a deviation from the applicable standard.

(a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report. If you are using the predominant activity alternative under §63.4490(c), you must keep records of the data and calculations used to determine the predominant activity. If you are using the facility-specific emission limit alternative under §63.4490(c), you must keep records of the data used to calculate the facility-specific emission limit for the initial compliance demonstration. You must also keep records of any data used in each annual predominant activity determination and in the calculation of the facility-specific emission limit for each 12-month compliance period included in the semi-annual compliance reports.

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the mass fraction of coating solids for each coating. If you conducted testing to determine mass fraction of organic HAP, density, or mass fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each compliance period, the records specified in paragraphs (c)(1) through (4) of this section.

(1) A record of the coating operations on which you used each compliance option and the time periods (beginning and ending dates and times) for each option you used.

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 1 of §63.4541.

(3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2 of §63.4551 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4); the calculation of the total mass of coating solids used each month using Equation 2 of §63.4551; and the calculation of each 12-month organic HAP emission rate using Equation 3 of §63.4551.

(4) For the emission rate with add-on controls option, records of the calculations specified in paragraphs (c)(4)(i) through (v) of this section.

(i) The calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.4551; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4);

(ii) The calculation of the total mass of coating solids used each month using Equation 2 of §63.4551;

(iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.4561 and Equations 2, 3, and 3A through 3C of §63.4561, as applicable;

(iv) The calculation of each month's organic HAP emission rate using Equation 4 of §63.4561; and

(v) The calculation of each 12-month organic HAP emission rate using Equation 5 of §63.4561.

(d) A record of the name and mass of each coating, thinner and/or other additive, and cleaning material used during each compliance period. If you are using the compliant material option for all coatings at the source, you may maintain purchase records for each material used rather than a record of the mass used.

(e) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period.

(f) A record of the mass fraction of coating solids for each coating used during each compliance period.

(g) If you use an allowance in Equation 1 of §63.4551 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to §63.4551(e)(4), you must keep records of the information specified in paragraphs (g)(1) through (3) of this section.

(1) The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1 of §63.4551, a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility; and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of §63.4551.

(3) The methodology used in accordance with §63.4551(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(h) You must keep records of the date, time, and duration of each deviation.

(i) If you use the emission rate with add-on controls option, you must keep the records specified in paragraphs (i)(1) through (8) of this section.

(1) For each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) The records required to show continuous compliance with each operating limit specified in Table 1 to this subpart that applies to you.

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in §63.4565(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§63.4564 and 63.4565(b) through (e), including the records specified in paragraphs (i)(5)(i) through (iii) of this section that apply to you.

(i) *Records for a liquid-to-uncaptured gas protocol using a temporary total enclosure or building enclosure.* Records of the mass of total volatile hydrocarbon (TVH) as measured by Method 204A or 204F of appendix M to 40 CFR part 51 for each material used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(ii) *Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.* Records of the mass of TVH emissions captured by the emission capture system as measured by Method 204B or 204C of appendix M to 40 CFR part 51 at the inlet to the add-on control device, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in §63.4565(e), if applicable.

(6) The records specified in paragraphs (i)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.4566.

(i) Records of each add-on control device performance test conducted according to §§63.4564 and 63.4566.

(ii) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.

(7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in §63.4567 and to document compliance with the operating limits as specified in Table 1 to this subpart.

(8) A record of the work practice plan required by §63.4493 and documentation that you are implementing the plan on a continuous basis.

**§ 63.4531 In what form and for 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). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(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 may keep the records off-site for the remaining 3 years.

**Compliance Requirements for the Compliant Material Option**

**§ 63.4540 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements in §63.4541. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through that month plus the next 12 months. The initial compliance demonstration includes the calculations according to §63.4541 and supporting documentation showing that during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limit in §63.4490, and that you used no thinners and/or other additives, or cleaning materials that contained organic HAP as determined according to §63.4541(a).

**§ 63.4541 How do I demonstrate initial compliance with the emission limitations?**

You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the emission rate without add-on controls option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limits in §63.4490 and must use no thinner and/or other additive, or cleaning material that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§63.4492 and 63.4493, respectively. You must conduct a separate initial compliance demonstration for each general use coating, TPO coating, automotive lamp coating, and assembled on-road vehicle coating affected source unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. Use the procedures in this section on each coating, thinner and/or other additive, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the organic HAP content of coatings, thinners and/or other additives, and cleaning materials that are reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

(a) *Determine the mass fraction of organic HAP for each material used.* You must determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during the compliance period by using one of the options in paragraphs (a)(1) through (5) of this section.

(1) *Method 311 (appendix A to 40 CFR part 63).* You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when performing a Method 311 test.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point (e.g*.,* 0.3791).

(ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point ( *e.g.,* 0.763).

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may use the alternative method contained in appendix A to this subpart, rather than Method 24. You may use the volatile fraction that is emitted, as measured by the alternative method in appendix A to this subpart, as a substitute for the mass fraction of organic HAP.

(3) *Alternative method.* You may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of this section, then the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 3 or 4 to this subpart. If you use the tables, you must use the values in Table 3 for all solvent blends that match Table 3 entries according to the instructions for Table 3, and you may use Table 4 only if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 and you know only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (appendix A to 40 CFR part 63) test indicate higher values than those listed on Table 3 or 4 to this subpart, the Method 311 results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(b) *Determine the mass fraction of coating solids for each coating.* You must determine the mass fraction of coating solids (kg (lb) of coating solids per kg (lb) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified in paragraphs (b)(1) through (3) of this section.

(1) *Method 24 (appendix A to 40 CFR part 60).* Use Method 24 for determining the mass fraction of coating solids. For reactive adhesives in which some of the liquid fraction reacts to form solids, you may use the alternative method contained in appendix A to this subpart, rather than Method 24, to determine the mass fraction of coating solids.

(2) *Alternative method.* You may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(3) *Information from the supplier or manufacturer of the material.* You may obtain the mass fraction of coating solids for each coating from the supplier or manufacturer. If there is disagreement between such information and the test method results, then the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(c) *Calculate the organic HAP content of each coating.* Calculate the organic HAP content, kg (lb) organic HAP emitted per kg (lb) coating solids used, of each coating used during the compliance period using Equation 1 of this section:

$$H_c = \frac{W_c}{S_c} \qquad (Eq.\ 1)$$

Where:

$H_c$= Organic HAP content of the coating, kg (lb) of organic HAP emitted per kg (lb) coating solids used.

$W_c$= Mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to paragraph (a) of this section.

$S_c$= Mass fraction of coating solids, kg coating solids per kg coating, determined according to paragraph (b) of this section.

(d) *Compliance demonstration.* The calculated organic HAP content for each coating used during the initial compliance period must be less than or equal to the applicable emission limit in §63.4490; and each thinner and/or other additive, and cleaning material used during the initial compliance period must contain no organic HAP, determined according to paragraph (a) of this section. You must keep all records required by §§63.4530 and 63.4531. As part of the notification of compliance status required in §63.4510, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.4490, and you used no thinners and/or other additives, or cleaning materials that contained organic HAP, determined according to the procedures in paragraph (a) of this section.

**§ 63.4542 How do I demonstrate continuous compliance with the emission limitations?**

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content (determined using Equation 1 of §63.4541) exceeds the applicable emission limit in §63.4490, and use no thinner and/or other additive, or cleaning material that contains organic HAP, determined according to §63.4541(a). A compliance period consists of 12 months. Each month, after the end of the initial compliance period described in §63.4540, is the end of a compliance period consisting of that month and the preceding 11 months. If you are complying with a facility-specific emission limit under §63.4490(c), you must also perform the calculation using Equation 1 in §63.4490(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner and/or other additive, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(5).

(c) As part of each semiannual compliance report required by §63.4520, you must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the applicable emission limit in §63.4490, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.4490, and you used no thinner and/or other additive, or cleaning material that contained organic HAP, determined according to §63.4541(a).

(d) You must maintain records as specified in §§63.4530 and 63.4531.

**Compliance Requirements for the Emission Rate Without Add-On Controls Option**

**§ 63.4550 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.4551. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and mass of coating solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the calculations according to §63.4551 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.4490.

**§ 63.4551 How do I demonstrate initial compliance with the emission limitations?**

You may use the emission rate without add-on controls option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the compliant material option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or group of coating operations must meet the applicable emission limit in §63.4490, but is not required to meet the operating limits or work practice standards in §§63.4492 and 63.4493,

respectively. You must conduct a separate initial compliance demonstration for each general use, TPO, automotive lamp, and assembled on-road vehicle coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the emission rate without add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month according to the requirements in §63.4541(a).

(b) *Determine the mass fraction of coating solids.* Determine the mass fraction of coating solids (kg (lb) of coating solids per kg (lb) of coating) for each coating used during each month according to the requirements in §63.4541(b).

(c) *Determine the density of each material.* Determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 and other such information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(d) *Determine the volume of each material used.* Determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(e) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using Equation 1 of this section.

$$H_e = A + B + C - R_w \qquad (Eq.\ 1)$$

Where:

$H_e$= Total mass of organic HAP emissions during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg, as calculated in Equation 1B of this section.

C = Total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.

$R_w$= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, kg, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to $R_W$ if you do not wish to use this allowance.)

(1) Calculate the kg organic HAP in the coatings used during the month using Equation 1A of this section:

$$A = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad (Eq.\ 1A)$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kg coating per liter coating.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

m = Number of different coatings used during the month.

(2) Calculate the kg of organic HAP in the thinners and/or other additives used during the month using Equation 1B of this section:

$$B = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(\mathrm{D}_{t,j}\right)\left(\mathrm{W}_{t,j}\right) \qquad (Eq.\ 1B)$$

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

n = Number of different thinners and/or other additives used during the month.

(3) Calculate the kg organic HAP in the cleaning materials used during the month using Equation 1C of this section:

$$C = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(\mathrm{D}_{s,k}\right)\left(W_{s,k}\right) \qquad (Eq.\ 1C)$$

Where:

C = Total mass of organic HAP in the cleaning materials used during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material.

p = Number of different cleaning materials used during the month.

(4) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of this section, then you must determine the mass according to paragraphs (e)(4)(i) through (iv) of this section.

(i) You may only include waste materials in the determination that are generated by coating operations in the affected source for which you use Equation 1 of this section and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. You may not include organic HAP contained in wastewater.

(ii) You must determine either the amount of the waste materials sent to a TSDF during the month or the amount collected and stored during the month and designated for future transport to a TSDF. Do not include in your determination any waste materials sent to a TSDF during a month if you have already included them in the amount collected and stored during that month or a previous month.

(iii) Determine the total mass of organic HAP contained in the waste materials specified in paragraph (e)(4)(ii) of this section.

(iv) You must document the methodology you use to determine the amount of waste materials and the total mass of organic HAP they contain, as required in §63.4530(g). If waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(f) *Calculate the total mass of coating solids used.* Determine the total mass of coating solids used, kg, which is the combined mass of coating solids for all the coatings used during each month, using Equation 2 of this section:

$$M_{st} = \sum_{i=1}^{m} (Vol_{c,i})(D_{c,i})(M_{s,i}) \qquad (Eq.\ 2)$$

Where:

$M_{st}$= Total mass of coating solids used during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kgs per liter coating, determined according to §63.4551(c).

$M_{s,i}$= Mass fraction of coating solids for coating, i, kgs solids per kg coating, determined according to §63.4541(b).

m = Number of coatings used during the month.

(g) *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the compliance period, kg (lb) organic HAP emitted per kg (lb) coating solids used, using Equation 3 of this section:

$$H_{yr} = \frac{\sum_{y=1}^{n} H_e}{\sum_{y=1}^{n} M_{st}} \qquad (Eq.\ 3)$$

Where:

$H_{yr}$= Average organic HAP emission rate for the compliance period, kg organic HAP emitted per kg coating solids used.

$H_e$= Total mass of organic HAP emissions from all materials used during month, y, kg, as calculated by Equation 1 of this section.

$M_{st}$= Total mass of coating solids used during month, y, kg, as calculated by Equation 2 of this section.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(h) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period calculated using Equation 3 of this section must be less than or equal to the applicable emission limit for each subcategory in §63.4490 or the predominant activity or facility-specific emission limit allowed in §63.4490(c). You must keep all records as required by §§63.4530 and 63.4531. As part of the notification of compliance status required by §63.4510, you must identify the coating operation(s) for which you used the emission rate without add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.4490, determined according to the procedures in this section.

**§ 63.4552 How do I demonstrate continuous compliance with the emission limitations?**

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to §63.4551(a) through (g), must be less than or equal to the applicable emission limit in §63.4490. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.4550 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.4551(a) through (g) on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.4490(c), you must also perform the calculation using Equation 1 in §63.4490(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.4490, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(6).

(c) As part of each semiannual compliance report required by §63.4520, you must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.4490, determined according to §63.4551(a) through (g).

(d) You must maintain records as specified in §§63.4530 and 63.4531.

**Compliance Requirements for the Emission Rate With Add-On Controls Option**

**§ 63.4560 By what date must I conduct performance tests and other initial compliance demonstrations?**

(a) *New and reconstructed affected sources.* For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.4483. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j), you must conduct a performance test of each capture system and add-on control device according to §§63.4564, 63.4565, and 63.4566 and establish the operating limits required by §63.4492 no later than 180 days after the applicable compliance date specified in §63.4483. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.4561(j), you must initiate the first material balance no later than the applicable compliance date specified in §63.4483.

(2) You must develop and begin implementing the work practice plan required by §63.4493 no later than the compliance date specified in §63.4483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.4561. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and mass of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.4564, 63.4565, and 63.4566; results of liquid-liquid material balances conducted according to §63.4561(j); calculations according to §63.4561 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.4490; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.4568; and documentation of whether you developed and implemented the work practice plan required by §63.4493.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.4492 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in §63.4561(j).

(b) *Existing affected sources.* For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.4483. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§63.4564, 63.4565, and 63.4566 and establish the operating limits required by §63.4492 no later than the compliance date specified in §63.4483. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.4561(j), you must initiate the first material balance no later than the compliance date specified in §63.4483.

(2) You must develop and begin implementing the work practice plan required by §63.4493 no later than the compliance date specified in §63.4483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.4561. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month

plus the next 12 months. You must determine the mass of organic HAP emissions and mass of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.4564, 63.4565, and 63.4566; results of liquid-liquid material balances conducted according to §63.4561(j); calculations according to §63.4561 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.4490; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.4568; and documentation of whether you developed and implemented the work practice plan required by §63.4493.

(c) You are not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if you receive approval to use the results of a performance test that has been previously conducted on that capture system or control device. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of this section.

(1) The previous test must have been conducted using the methods and conditions specified in this subpart.

(2) Either no process or equipment changes must have been made since the previous 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.

(3) Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.

**§ 63.4561 How do I demonstrate initial compliance?**

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§63.4490, 63.4492, and 63.4493. You must conduct a separate initial compliance demonstration for each general use, TPO, automotive lamp, and assembled on-road vehicle coating operation, unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed onsite (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coatings operation(s) for which you use the emission rate with add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(b) *Compliance with operating limits.* Except as provided in §63.4560(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of paragraph (j) of this section, you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.4492, using the procedures specified in §§63.4567 and 63.4568.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by §63.4493 during the initial compliance period, as specified in §63.4530.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in §63.4490 for each affected source in each subcategory.

(e) *Determine the mass fraction of organic HAP, density, volume used, and mass fraction of coating solids.* Follow the procedures specified in §63.4551(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner and/or other additive, and cleaning material used during each month; and the mass fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of §63.4551, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners and/or other additives, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(g) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (h) of this section to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balance.* Use Equation 1 of this section to calculate the organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. You must assume zero efficiency for the emission capture system and add-on control device for any period of time a deviation specified in §63.4563(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_C = \left(A_C + B_C + C_C - R_W - H_{UNC}\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) \qquad (Eq.\ 1)$$

Where:

$H_C$= Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

$A_C$= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.

$B_C$= Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.

$C_C$= Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, as calculated in Equation 1C of this section.

$R_w$= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to §63.4951(e)(4). (You may assign a value of zero to $R_w$ if you do not wish to use this allowance.)

$H_{UNC}$= Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.4563(c) and (d) that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.4564 and 63.4565 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.4564 and 63.4566 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg (lb), using Equation 1A of this section:

$$A_C = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \quad (Eq.\ 1A)$$

Where:

$A_C$= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kg per liter.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg per kg. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

m = Number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners and/or other additives used in the controlled coating operation, kg (lb), using Equation 1B of this section:

$$B_C = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \quad (Eq.\ 1B)$$

Where:

$B_C$= Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg per kg. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

n = Number of different thinners and/or other additives used.

(3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg (lb), using Equation 1C of this section:

$$C_C = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \quad (Eq.\ 1C)$$

Where:

$C_C$= Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg per kg.

p = Number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used in the controlled coating operation during deviations specified in §63.4563(c) and (d), using Equation 1D of this section:

$$H_{UNC} = \sum_{h=1}^{q} (Vol_h)(D_h)(W_h) \quad (Eq.\ 1D)$$

Where:

$H_{UNC}$= Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.4563(c) and (d) that occurred during the month in the controlled coating operation, kg.

$Vol_h$= Total volume of coating, thinner and/or other additive, or cleaning material, h, used in the controlled coating operation during deviations, liters.

$D_h$= Density of coating, thinner and/or other additives, or cleaning material, h, kg per liter.

$W_h$= Mass fraction of organic HAP in coating, thinner and/or other additives, or cleaning material, h, kg organic HAP per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

q = Number of different coatings, thinners and/or other additives, and cleaning materials used.

(i) [Reserved]

(j) *Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (j)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (j)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, based on measurement with the device required in paragraph (j)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60,

appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to §63.4551(c).

(5) Measure the volume of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.

(6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i WV_{c,i} + \sum_{j=1}^{n} Vol_j D_j WV_{t,j} + \sum_{k=1}^{p} Vol_k D_k WV_{s,k}} \qquad (Eq.\ 2)$$

Where:

$R_V$= Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

$M_{VR}$= Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

$Vol_i$= Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_i$= Density of coating, i, kg per liter.

$WV_{c,i}$= Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

$Vol_j$= Volume of thinner and/or other additive, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_j$= Density of thinner and/or other additive, j, kg per liter.

$WV_{t,j}$= Mass fraction of volatile organic matter for thinner and/or other additive, j, kg volatile organic matter per kg thinner and/or other additive. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

$Vol_k$= Volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_k$= Density of cleaning material, k, kg per liter.

$WV_{s,k}$= Mass fraction of volatile organic matter for cleaning material, k, kg volatile organic matter per kg cleaning material.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month.

p = Number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equation 3 of this section and according to paragraphs (j)(7)(i) through (iii) of this section:

$$H_{CSR} = \left(A_{CSR} + B_{CSR} + C_{CSR}\right)\left(\frac{R_v}{100}\right) \qquad (Eq.\ 3)$$

Where:

$H_{CSR}$= Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

$A_{CSR}$= Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A of this section.

$B_{CSR}$= Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

$C_{CSR}$= Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3C of this section.

$R_V$= Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

$$A_{CSR} = \sum_{i=1}^{m}\left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad (Eq.\ 3A)$$

Where:

$A_{CSR}$= Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{c,i}$= Density of coating, i, kg per liter.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

m = Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section:

$$B_{CSR} = \sum_{j=1}^{n} \left(\mathrm{Vol}_{t,j}\right)\left(\mathrm{D}_{t,j}\right)\left(\mathrm{W}_{t,j}\right) \quad (Eq.\ 3\mathrm{B})$$

Where:

$B_{CSR}$= Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

n = Number of different thinners and/or other additives used.

(iii) Calculate the mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg, using Equation 3C of this section:

$$C_{CSR} = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(\mathrm{D}_{s,k}\right)\left(\mathrm{W}_{s,k}\right) \quad (Eq.\ 3\mathrm{C})$$

Where:

$C_{CSR}$= Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg cleaning material.

p = Number of different cleaning materials used.

(k) *Calculate the total mass of coating solids used.* Determine the total mass of coating solids used, kg, which is the combined mass of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of §63.4551.

(l) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 4 of this section:

$$H_{HAP} = H_e - \sum_{i=1}^{q} \left(H_{C,i}\right) - \sum_{j=1}^{r} \left(H_{CSR,j}\right) \qquad (Eq.\ 4)$$

Where:

$H_{HAP}$= Total mass of organic HAP emissions for the month, kg.

$H_e$= Total mass of organic HAP emissions before add-on controls from all the coatings, thinners and/or other additives, and cleaning materials used during the month, kg, determined according to paragraph (f) of this section.

$H_{C,i}$= Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.

$H_{CSR,j}$= Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 3 of this section.

q = Number of controlled coating operations not controlled by a solvent recovery system using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

(m) *Calculate the organic HAP emission rate for the compliance period.* Determine the organic HAP emission rate for the compliance period, kg (lb) of organic HAP emitted per kg (lb) coating solids used, using Equation 5 of this section:

$$H_{annual} = \frac{\sum_{y=1}^{n} H_{HAP,y}}{\sum_{y=1}^{n} M_{st,y}} \qquad (Eq.\ 5)$$

Where:

$H_{annual}$= Organic HAP emission rate for the compliance period, kg organic HAP emitted per kg coating solids used.

$H_{HAP,y}$= Organic HAP emissions for month, y, kg, determined according to Equation 4 of this section.

$M_{st,y}$= Total mass of coating solids used during month, y, kg, from Equation 2 of §63.4551.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(n) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit for each subcategory in §63.4490 or the predominant activity or facility-specific emission limit allowed in §63.4490(c). You must keep all records as required by §§63.4530 and 63.4531. As part of the notification of compliance status required by §63.4510, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.4490, and you achieved the operating limits required by §63.4492 and the work practice standards required by §63.4493.

**§ 63.4562 [Reserved]**

**§ 63.4563 How do I demonstrate continuous compliance with the emission limitations?**

(a) To demonstrate continuous compliance with the applicable emission limit in §63.4490, the organic HAP emission rate for each compliance period, determined according to the procedures in §63.4561, must be equal to or less than the applicable emission limit in §63.4490. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.4560 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.4561 on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.4490(c), you must also perform the calculation using Equation 1 in §63.4490(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.4490, this is a deviation from the emission limitation for that compliance period that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by §63.4492 that applies to you, as specified in Table 1 to this subpart, when the coating line is in operation.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator.

(d) You must meet the requirements for bypass lines in §63.4568(b) for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7). For the purposes of completing the compliance calculations specified in §§63.4561(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of §63.4561.

(e) You must demonstrate continuous compliance with the work practice standards in §63.4493. If you did not develop a work practice plan, or you did not implement the plan, or you did not keep the records required by §63.4530(i)(8), this is a deviation from the work practice standards that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7).

(f) As part of each semiannual compliance report required in §63.4520, you must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.4490, and you achieved the operating limits required by §63.4492 and the work practice standards required by §63.4493 during each compliance period.

(g)–(i) [Reserved]

(j) You must maintain records as specified in §§63.4530 and 63.4531.

[69 FR 20990, Apr. 19, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

**§ 63.4564 What are the general requirements for performance tests?**

(a) You must conduct each performance test required by §63.4560 according to the requirements in §63.7(e)(1) and under the conditions in this section, unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(2) *Representative emission capture system and add-on control device operating conditions.* You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an emission capture system according to the requirements in §63.4565. You must conduct each performance test of an add-on control device according to the requirements in §63.4566.

**§ 63.4565 How do I determine the emission capture system efficiency?**

You must use the procedures and test methods in this section to determine capture efficiency as part of the performance test required by §63.4560.

(a) *Assuming 100 percent capture efficiency.* You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of this section are met:

(1) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All coatings, thinners and/or other additives, and cleaning materials used in the coating operation are applied within the capture system; coating solvent flash-off, curing, and drying occurs within the capture system; and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of the production, which includes surface preparation activities and drying and curing time.

(c) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of this section to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of

an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating, thinner and/or other additive, and cleaning material used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term volatile organic compounds (VOC) in the methods.

(3) Use Equation 1 of this section to calculate the total mass of TVH liquid input from all the coatings, thinners and/or other additives, and cleaning materials used in the coating operation during each capture efficiency test run:

$$TVH_{used} = \sum_{i=1}^{n} (TVH_i)(Vol_i)(D_i) \quad (Eq.\ 1)$$

Where:

$TVH_{used}$= Mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.

$TVH_i$= Mass fraction of TVH in coating, thinner and/or other additive, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

$Vol_i$= Total volume of coating, thinner and/or other additive, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

$D_i$= Density of coating, thinner and/or other additive, or cleaning material, i, kg material per liter material.

n = Number of different coatings, thinners and/or other additives, and cleaning materials used in the coating operation during the capture efficiency test run.

(4) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system. They are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(5) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of this section:

$$CE = \frac{\left(TVH_{used} - TVH_{uncaptured}\right)}{TVH_{used}} \times 100 \qquad (Eq.\ 2)$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{used}$= Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

$TVH_{uncaptured}$= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(6) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) The sampling points for the Method 204B or 204C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct and the total emissions entering the add-on control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR part 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(4) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of this section:

$$CE = \frac{TVH_{captured}}{\left(TVH_{captured} + TVH_{uncaptured}\right)} \times 100 \qquad (Eq.\ 3)$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{captured}$= Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

$TVH_{uncaptured}$ = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(5) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section and subject to the approval of the Administrator, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

**§ 63.4566 How do I determine the add-on control device emission destruction or removal efficiency?**

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.4560. You must conduct three test runs as specified in §63.7(e)(3) and each test run must last at least 1 hour.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight.

(4) Use Method 4 of appendix A to 40 CFR part 60, to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A of appendix A to 40 CFR part 60.

(1) Use Method 25 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

(2) Use Method 25A if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A if the add-on control device is not an oxidizer.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet to the atmosphere of each device. For example, if one add-on control device is a concentrator with an outlet to the atmosphere for the high-volume dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet to the atmosphere for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions:

$$M_f = Q_{sd} C_c (12)(0.0416)(10^{-6}) \quad (Eq.\ 1)$$

Where:

$M_f$= Total gaseous organic emissions mass flow rate, kg/per hour (h).

$C_c$= Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, parts per million by volume (ppmv), dry basis.

$Q_{sd}$= Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/$m^3$) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \qquad (Eq.\ 2)$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

$M_{fi}$= Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

$M_{fo}$= Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

**§ 63.4567 How do I establish the emission capture system and add-on control device operating limits during the performance test?**

During the performance test required by §63.4560 and described in §§63.4564, 63.4565, and 63.4566, you must establish the operating limits required by §63.4492 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.4492.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section.

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(3) You must monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity (i.e*.,* conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) Monthly external inspection of the catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst then you must conduct a new performance test to determine destruction efficiency according to §63.4566. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

(c) *Regenerative carbon adsorbers.* If your add-on control device is a regenerative carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (e.g*.,* steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your regenerative carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(d) *Condensers.* If your add-on control device is a condenser, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators.* If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (e)(1) through (4) of this section.

(1) During the performance test, you must monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

(3) During the performance test, you must monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(4) Use the data collected during the performance test to calculate and record the average pressure drop. This is the minimum operating limit for the dilute stream across the concentrator.

(f) *Emission capture systems.* For each capture device that is not part of a PTE that meets the criteria of §63.4565(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart.

(1) During the capture efficiency determination required by §63.4560 and described in §§63.4564 and 63.4565, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

**§ 63.4568 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?**

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS 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 is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You must meet the requirements of paragraphs (b)(1) and (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) You must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (v) of this section.

(i) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

(ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

(iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

(v) *Flow direction indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow direction indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. Each time the flow direction changes, the next reading of the time of occurrence and flow direction must be recorded. The flow direction indicator must be installed in each bypass line or air makeup supply line that could divert the emissions away from the add-on control device to the atmosphere.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in §63.4520.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install gas temperature monitors upstream and/or downstream of the catalyst bed as required in §63.3967(b).

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (v) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.

(iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

(iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.

(v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

(d) *Regenerative carbon adsorbers.* If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas ( *e.g.,* steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) through (3) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(3) For all regenerative carbon adsorbers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(e) *Condensers.* If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The temperature monitor must provide a gas temperature record at least once every 15 minutes.

(2) For all condensers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(f) *Concentrators.* If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (g)(2) of this section.

(g) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of this section.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (g)(1)(i) through (vii) of this section.

(i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

(ii) Use a flow sensor with an accuracy of at least 10 percent of the flow.

(iii) Perform an initial sensor calibration in accordance with the manufacturer's requirements.

(iv) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.

(v) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.

(vi) Perform leak checks monthly.

(vii) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (g)(2)(i) through (vii) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.

(ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.

(iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.

(iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.

(vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

**Other Requirements and Information**

**§ 63.4580 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the 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 requirements in §§63.4481 through 4483 and §§63.4490 through 4493.

(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.

**§ 63.4581 What definitions apply to this subpart?**

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, and in this section as follows:

*Additive* means a material that is added to a coating after purchase from a supplier (e.g., catalysts, activators, accelerators).

*Add-on control* means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

*Adhesive, adhesive coating* means any chemical substance that is applied for the purpose of bonding two surfaces together. 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.

*Assembled on-road vehicle coating* means any coating operation in which coating is applied to the surface of some component or surface of a fully assembled motor vehicle or trailer intended for on-road use including, but not limited to, components or surfaces on automobiles and light-duty trucks that have been repaired after a collision or otherwise repainted, fleet delivery trucks, and motor homes and other recreational vehicles (including camping trailers and fifth wheels). Assembled on-road vehicle coating includes the concurrent coating of parts of the assembled on-road vehicle that are painted off-vehicle to protect systems, equipment, or to allow full coverage. Assembled on-road vehicle coating does not include surface coating operations that meet the applicability criteria of the Automobiles and Light-Duty Trucks NESHAP. Assembled on-road vehicle coating also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles.

*Automotive lamp coating* means any coating operation in which coating is applied to the surface of some component of the body of an exterior automotive lamp, including the application of reflective argent coatings and clear topcoats. Exterior automotive lamps include head lamps, tail lamps, turn signals, brake lights, and side marker lights. Automotive lamp coating does not include any coating operation performed on an assembled on-road vehicle.

*Capture device* means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

*Capture efficiency or capture system efficiency* means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.

*Capture system* means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

*Cleaning material* means a solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried or wet coating ( *e.g.,* depainting), from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

*Coating* means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered coatings for the purposes of this subpart. A liquid plastic coating means a coating made from fine particle-size polyvinyl chloride (PVC) in solution (also referred to as a plastisol).

*Coating operation* means equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a given

quantity of coating or cleaning material is applied to a given part and all subsequent points in the affected source where organic HAP are emitted from the specific quantity of coating or cleaning material on the specific part. There may be multiple coating operations in an affected source. Coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

*Coatings solids* means the nonvolatile portion of the coating that makes up the dry film.

*Continuous parameter monitoring system (CPMS)* means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of coating operation, or capture system, or add-on control device parameters.

*Controlled coating operation* means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

*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 limit or operating limit or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Emission limitation* means the aggregate of all requirements associated with a compliance option including emission limit, operating limit, work practice standard, etc.

*Enclosure* means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

*Exempt compound* means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

*Facility maintenance* means the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.

*General use coating* means any coating operation that is not an automotive lamp, TPO, or assembled on-road vehicle coating operation.

*Hobby shop* means any surface coating operation, located at an affected source, that is used exclusively for personal, noncommercial purposes by the affected source's employees or assigned personnel.

*Manufacturer's formulation data* means data on a material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in §63.4541. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

*Mass fraction of coating solids* means the ratio of the mass of solids (also known as the mass of nonvolatiles) to the mass of a coating in which it is contained; kg of coating solids per kg of coating.

*Mass fraction of organic HAP* means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

*Month* means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

*Non-HAP coating* means, for the purposes of this subpart, a coating that contains no more than 0.1 percent by mass of any individual organic HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and no more than 1.0 percent by mass for any other individual HAP.

*Organic HAP content* means the mass of organic HAP emitted per mass of coating solids used for a coating calculated using Equation 1 of §63.4541. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, organic HAP content is the mass of organic HAP that is emitted, rather than the organic HAP content of the coating as it is received.

*Permanent total enclosure (PTE)* means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

*Personal watercraft* means a vessel (boat) which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person or persons sitting, standing, or kneeling on the vessel, rather than in the conventional manner of sitting or standing inside the vessel.

*Plastic part and product* means any piece or combination of pieces of which at least one has been formed from one or more resins. Such pieces may be solid, porous, flexible or rigid.

*Protective oil* means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

*Reactive adhesive* means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70 percent of the liquid components of the system, excluding water, react during the process.

*Research or laboratory facility* means a facility whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a *de minimis* manner.

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

*Startup, initial* means the first time equipment is brought online in a facility.

*Surface preparation* means use of a cleaning material on a portion of or all of a substrate. This includes use of a cleaning material to remove dried coating, which is sometimes called depainting.

*Temporary total enclosure* 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 appendix M, 40 CFR part 51.

*Thermoplastic olefin (TPO)* means polyolefins (blends of polypropylene, polyethylene and its copolymers). This also includes blends of TPO with polypropylene and polypropylene alloys including, but not limited to, thermoplastic elastomer (TPE), TPE polyurethane (TPU), TPE polyester (TPEE), TPE polyamide (TPAE), and thermoplastic elastomer polyvinyl chloride (TPVC).

*Thermoplastic olefin (TPO) coating* means any coating operation in which the coatings are components of a system of coatings applied to a TPO substrate, including adhesion promoters, primers, color coatings, clear coatings and topcoats. Thermoplastic olefin coating does not include the coating of TPO substrates on assembled on-road vehicles.

*Thinner* means an organic solvent that is added to a coating after the coating is received from the supplier.

*Total volatile hydrocarbon (TVH)* means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

*Uncontrolled coating operation* means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

*Volatile organic compound (VOC)* means any compound defined as VOC in 40 CFR 51.100(s).

*Wastewater* means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

**Table 1 to Subpart PPPP of Part 63—Operating Limits if Using the Emission Rate With Add-On Controls Option**

If you are required to comply with operating limits by §63.4491(c), you must comply with the applicable operating limits in the following table:

| For the following device . . . | You must meet the following operating limit . . . | And you must demonstrate continuous compliance with the operating limit by . . . |
|---|---|---|
| 1. Thermal oxidizer | a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.4567(a). | i. Collecting the combustion temperature data according to §63.4568(c);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit. |
| 2. Catalytic oxidizer | a. The average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to §63.4567(b); and either | i. Collecting the temperature data according to §63.4568(c);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit. |
| | b. Ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to §63.4567(b)(2); or | i. Collecting the temperature data according to §63.4568(c);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average temperature difference at or above the temperature difference limit. |
| | c. Develop and implement an inspection and maintenance plan according to §63.4567(b)(4). | i. Maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by §63.4567(b)(4), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations. |
| 3. Regenerative carbon adsorber | a. The total regeneration desorbing gas ( *e.g.,* steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to §63.4567(c); and | i. Measuring the total regeneration desorbing gas (e.g*.,* steam or nitrogen) mass flow for each regeneration cycle according to §63.4568(d); and<br>ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit. |
| | b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to §63.4567(c). | i. Measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to §63.4568(d); and<br>ii. Operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded |

| For the following device . . . | You must meet the following operating limit . . . | And you must demonstrate continuous compliance with the operating limit by . . . |
|---|---|---|
| | | temperature of the carbon bed is at or below the temperature limit. |
| 4. Condenser | a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to §63.4567(d). | i. Collecting the condenser outlet (product side) gas temperature according to §63.4568(e);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit. |
| 5. Concentrators, including zeolite wheels and rotary carbon adsorbers | a. The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to §63.4567(e); and | i. Collecting the temperature data according to §63.4568(f);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average temperature at or above the temperature limit. |
| | b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to §63.4567(e). | i. Collecting the pressure drop data according to §63.4568(f);<br>ii. Reducing the pressure drop data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average pressure drop at or above the pressure drop limit. |
| 6. Emission capture system that is a PTE according to §63.4565(a) | a. The direction of the air flow at all times must be into the enclosure; and either | i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to §63.4568(g)(1) or the pressure drop across the enclosure according to §63.4568(g)(2); and<br>ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times. |
| | b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or | i. *See* items 6.a.i and 6.a.ii. |
| | c. The pressure drop across the enclosure must be at least 0.007 inch $H_2O$, as established in Method 204 of appendix M to 40 CFR part 51. | i. *See* items 6.a.i and 6.a.ii. |
| 7. Emission capture system that is not a PTE according to §63.4565(a) | a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to §63.4567(f). | i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.4568(g);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit. |

**Table 2 to Subpart PPPP of Part 63—Applicability of General Provisions to Subpart PPPP of Part 63**

You must comply with the applicable General Provisions requirements according to the following table

| Citation | Subject | Applicable to subpart PPPP | Explanation |
|---|---|---|---|
| §63.1(a)(1)–(14) | General Applicability | Yes. | |
| §63.1(b)(1)–(3) | Initial Applicability Determination | Yes | Applicability to subpart PPPP is also specified in §63.4481. |
| §63.1(c)(1) | Applicability After Standard Established | Yes. | |
| §63.1(c)(2)–(3) | Applicability of Permit Program for Area Sources | No | Area sources are not subject to subpart PPPP. |
| §63.1(c)(4)–(5) | Extensions and Notifications | Yes. | |
| §63.1(e) | Applicability of Permit Program Before Relevant Standard is Set | Yes. | |
| §63.2 | Definitions | Yes | Additional definitions are specified in §63.4581. |
| §63.3(a)–(c) | Units and Abbreviations | Yes. | |
| §63.4(a)(1)–(5) | Prohibited Activities | Yes. | |
| §63.4(b)–(c) | Circumvention/Severability | Yes. | |
| §63.5(a) | Construction/Reconstruction | Yes. | |
| §63.5(b)(1)–(6) | Requirements for Existing, Newly Constructed, and Reconstructed Sources | Yes. | |
| §63.5(d) | Application for Approval of Construction/Reconstruction | Yes. | |
| §63.5(e) | Approval of Construction/Reconstruction | Yes. | |
| §63.5(f) | Approval of Construction/Reconstruction Based on Prior State Review | Yes. | |
| §63.6(a) | Compliance With Standards and Maintenance Requirements—Applicability | Yes. | |
| §63.6(b)(1)–(7) | Compliance Dates for New and Reconstructed Sources | Yes | Section 63.4483 specifies the compliance dates. |
| §63.6(c)(1)–(5) | Compliance Dates for Existing Sources | Yes | Section 63.4483 specifies the compliance dates. |
| §63.6(e)(1)–(2) | Operation and Maintenance | Yes. | |
| §63.6(e)(3) | Startup, Shutdown, and Malfunction Plan | Yes | Only sources using an add-on control device to comply with the standard must complete |

| Citation | Subject | Applicable to subpart PPPP | Explanation |
|---|---|---|---|
| | | | startup, shutdown, and malfunction plans. |
| §63.6(f)(1) | Compliance Except During Startup, Shutdown, and Malfunction | Yes | Applies only to sources using an add-on control device to comply with the standard. |
| §63.6(f)(2)–(3) | Methods for Determining Compliance | Yes. | |
| §63.6(g)(1)–(3) | Use of an Alternative Standard | Yes. | |
| §63.6(h) | Compliance With Opacity/Visible Emission Standards | No | Subpart PPPP does not establish opacity standards and does not require continuous opacity monitoring systems (COMS). |
| §63.6(i)(1)–(16) | Extension of Compliance | Yes. | |
| §63.6(j) | Presidential Compliance Exemption | Yes. | |
| §63.7(a)(1) | Performance Test Requirements—Applicability | Yes | Applies to all affected sources. Additional requirements for performance testing are specified in §§63.4564, 63.4565, and 63.4566. |
| §63.7(a)(2) | Performance Test Requirements—Dates | Yes | Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standards. Section 63.4560 specifies the schedule for performance test requirements that are earlier than those specified in §63.7(a)(2). |
| §63.7(a)(3) | Performance Tests Required By the Administrator | Yes. | |
| §63.7(b)–(e) | Performance Test Requirements—Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test | Yes | Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standards. |
| §63.7(f) | Performance Test Requirements—Use Alternative Test Method | Yes | Applies to all test methods except those of used to determine capture system efficiency. |
| §63.7(g)–(h) | Performance Test Requirements—Data Analysis, Recordkeeping, Reporting, Waiver of Test | Yes | Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standards. |
| §63.8(a)(1)–(3) | Monitoring Requirements—Applicability | Yes | Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standards. Additional requirements for monitoring are specified in §63.4568. |
| §63.8(a)(4) | Additional Monitoring Requirements | No | Subpart PPPP does not have monitoring requirements for flares. |
| §63.8(b) | Conduct of Monitoring | Yes. | |
| §63.8(c)(1)–(3) | Continuous Monitoring Systems (CMS) Operation and Maintenance | Yes | Applies only to monitoring of capture system and add-on control device efficiency at sources |

| Citation | Subject | Applicable to subpart PPPP | Explanation |
|---|---|---|---|
| | | | using these to comply with the standard. Additional requirements for CMS operations and maintenance are specified in §63.4568. |
| §63.8(c)(4) | CMS | No | Section 63.4568 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply. |
| §63.8(c)(5) | COMS | No | Subpart PPPP does not have opacity or visible emission standards. |
| §63.8(c)(6) | CMS Requirements | No | Section 63.4568 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply. |
| §63.8(c)(7) | CMS Out-of-Control Periods | Yes. | |
| §63.8(c)(8) | CMS Out-of-Control Periods and Reporting | No | Section 63.4520 requires reporting of CMS out-of-control periods. |
| §63.8(d)–(e) | Quality Control Program and CMS Performance Evaluation | No | Subpart PPPP does not require the use of continuous emissions monitoring systems. |
| §63.8(f)(1)–(5) | Use of an Alternative Monitoring Method | Yes. | |
| §63.8(f)(6) | Alternative to Relative Accuracy Test | No | Subpart PPPP does not require the use of continuous emissions monitoring systems. |
| §63.8(g)(1)–(5) | Data Reduction | No | Sections 63.4567 and 63.4568 specify monitoring data reduction. |
| §63.9(a)–(d) | Notification Requirements | Yes. | |
| §63.9(e) | Notification of Performance Test | Yes | Applies only to capture system and add-on control device performance tests at sources using these to comply with the standards. |
| §63.9(f) | Notification of Visible Emissions/Opacity Test | No | Subpart PPPP does not have opacity or visible emission standards. |
| §63.9(g)(1)–(3) | Additional Notifications When Using CMS | No | Subpart PPPP does not require the use of continuous emissions monitoring systems. |
| §63.9(h) | Notification of Compliance Status | Yes | Section 63.4510 specifies the dates for submitting the notification of compliance status. |
| §63.9(i) | Adjustment of Submittal Deadlines | Yes. | |
| §63.9(j) | Change in Previous Information | Yes. | |
| §63.10(a) | Recordkeeping/Reporting—Applicability and General Information | Yes. | |
| §63.10(b)(1) | General Recordkeeping Requirements | Yes | Additional requirements are specified in §§63.4530 and 63.4531. |
| §63.10(b)(2) | Recordkeeping Relevant to Startup, | Yes | Requirements for startup, shutdown, and |

| Citation | Subject | Applicable to subpart PPPP | Explanation |
|---|---|---|---|
| (i)–(v) | Shutdown, and Malfunction Periods and CMS | | malfunction records only apply to add-on control devices used to comply with the standards. |
| §63.10(b)(2)(vi)–(xi) | | Yes. | |
| §63.10(b)(2)(xii) | Records | Yes. | |
| §63.10(b)(2)(xiii) | | No | Subpart PPPP does not require the use of continuous emissions monitoring systems. |
| §63.10(b)(2)(xiv) | | Yes. | |
| §63.10(b)(3) | Recordkeeping Requirements for Applicability Determinations | Yes. | |
| §63.10(c)(1)–(6) | Additional Recordkeeping Requirements for Sources with CMS | Yes | |
| §63.10(c)(7)–(8) | | No | The same records are required in §63.4520(a)(7). |
| §63.10(c)(9)–(15) | | Yes. | |
| §63.10(d)(1) | General Reporting Requirements | Yes | Additional requirements are specified in §63.4520. |
| §63.10(d)(2) | Report of Performance Test Results | Yes | Additional requirements are specified in §63.4520(b). |
| §63.10(d)(3) | Reporting Opacity or Visible Emissions Observations | No | Subpart PPPP does not require opacity or visible emissions observations. |
| §63.10(d)(4) | Progress Reports for Sources With Compliance Extensions | Yes. | |
| §63.10(d)(5) | Startup, Shutdown, and Malfunction Reports | Yes | Applies only to add-on control devices at sources using these to comply with the standards. |
| §63.10(e)(1)–(2) | Additional CMS Reports | No | Subpart PPPP does not require the use of continuous emissions monitoring systems. |
| §63.10(e)(3) | Excess Emissions/CMS Performance Reports | No | Section 63.4520(b) specifies the contents of periodic compliance reports. |
| §63.10(e)(4) | COMS Data Reports | No | Subpart PPPP does not specify requirements for opacity or COMS. |
| §63.10(f) | Recordkeeping/Reporting Waiver | Yes. | |
| §63.11 | Control Device Requirements/Flares | No | Subpart PPPP does not specify use of flares for compliance. |
| §63.12 | State Authority and Delegations | Yes. | |

| Citation | Subject | Applicable to subpart PPPP | Explanation |
|---|---|---|---|
| §63.13 | Addresses | Yes. | |
| §63.14 | Incorporation by Reference | Yes. | |
| §63.15 | Availability of Information/Confidentiality | Yes. | |

**Table 3 to Subpart PPPP of Part 63—Default Organic HAP Mass Fraction for Solvents and Solvent Blends**

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching either the solvent blend name or CAS number, or use the organic HAP mass fraction from table 4 to this subpart if neither the name or CAS number match.

| Solvent/solvent blend | CAS. No. | Average organic HAP mass fraction | Typical organic HAP, percent by mass |
|---|---|---|---|
| 1. Toluene | 108–88–3 | 1.0 | Toluene. |
| 2. Xylene(s) | 1330–20–7 | 1.0 | Xylenes, ethylbenzene. |
| 3. Hexane | 110–54–3 | 0.5 | n-hexane. |
| 4. n-Hexane | 110–54–3 | 1.0 | n-hexane. |
| 5. Ethylbenzene | 100–41–4 | 1.0 | Ethylbenzene. |
| 6. Aliphatic 140 | | 0 | None. |
| 7. Aromatic 100 | | 0.02 | 1% xylene, 1% cumene. |
| 8. Aromatic 150 | | 0.09 | Naphthalene. |
| 9. Aromatic naphtha | 64742–95–6 | 0.02 | 1% xylene, 1% cumene. |
| 10. Aromatic solvent | 64742–94–5 | 0.1 | Naphthalene. |
| 11. Exempt mineral spirits | 8032–32–4 | 0 | None. |
| 12. Ligroines (VM & P) | 8032–32–4 | 0 | None. |
| 13. Lactol spirits | 64742–89–6 | 0.15 | Toluene. |
| 14. Low aromatic white spirit | 64742–82–1 | 0 | None. |
| 15. Mineral spirits | 64742–88–7 | 0.01 | Xylenes. |
| 16. Hydrotreated naphtha | 64742–48–9 | 0 | None. |
| 17. Hydrotreated light distillate | 64742–47–8 | 0.001 | Toluene. |
| 18. Stoddard solvent | 8052–41–3 | 0.01 | Xylenes. |
| 19. Super high-flash naphtha | 64742–95–6 | 0.05 | Xylenes. |
| 20. Varsol®solvent | 8052–49–3 | 0.01 | 0.5% xylenes, 0.5% ethylbenzene. |
| 21. VM & P naphtha | 64742–89–8 | 0.06 | 3% toluene, 3% xylene. |

| | | | |
|---|---|---|---|
| 22. Petroleum distillate mixture | 68477–31–6 | 0.08 | 4% naphthalene, 4% biphenyl. |

**Table 4 to Subpart PPPP of Part 63—Default Organic HAP Mass Fraction for Petroleum Solvent Groups[a]**

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

| Solvent type | Average organic HAP mass fraction | Typical organic HAP, percent by mass |
|---|---|---|
| Aliphatic[b] | 0.03 | 1% Xylene, 1% Toluene, and 1% Ethylbenzene. |
| Aromatic[c] | 0.06 | 4% Xylene, 1% Toluene, and 1% Ethylbenzene. |

[a]Use this table only if the solvent blend does not match any of the solvent blends in Table 3 to this subpart by either solvent blend name or CAS number and you only know whether the blend is aliphatic or aromatic.

[b]Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

[c]Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

**Appendix A to Subpart PPPP of Part 63—Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives**

1.0 Applicability and Principle

1.1 *Applicability:* This method applies to the determination of weight volatile matter content and weight solids content for most one-part or multiple-part reactive adhesives. Reactive adhesives are composed, in large part, of monomers that react during the adhesive curing reaction, and, as a result, do not volatilize. The monomers become integral parts of the cured adhesive through chemical reaction. At least 70 weight percent of the system, excluding water and non-volatile solids such as fillers, react during the process. This method is not appropriate for cyanoacrylates. For cyanoacrylates, South Coast Air Quality Management District Test Method 316B should be used. This method is not appropriate for one-part moisture cure urethane adhesives or for silicone adhesives. For one-part moisture cure urethane adhesives and for silicone adhesives, EPA Method 24 should be used.

1.2 Principle: One-part and multiple-part reactive adhesives undergo a reactive conversion from liquid to solid during the application and assembly process. Reactive adhesives are applied to a single surface, but then are usually quickly covered with another mating surface to achieve a bonded assembly. The monomers employed in such systems typically react and are converted to non-volatile solids. If left uncovered, as in a Method 24 (ASTM D2369) test, the reaction is inhibited by the presence of oxygen and volatile loss of the reactive components competes more heavily with the cure reaction. If this were to happen under normal use conditions, the adhesives would not provide adequate performance. This method minimizes this undesirable deterioration of the adhesive performance.

2.0 Materials and Apparatus

2.1 Aluminum foil, aluminum sheet, non-leaching plastic film or non-leaching plastic sheet, approximately 3 inches by 3 inches. Precondition the foil, film, or sheet for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the foil, film, or sheet.

2.2 Flat, rigid support panels slightly larger than the foil, film, or sheet. Polypropylene with a minimum thickness of 1/8 inch is recommended for the support panels. Precondition the support panels for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the support panels.

2.3 Aluminum spacers, 1/8 inch thick. Precondition the spacers for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the spacers.

2.4 Forced draft oven, type IIA or IIB as specified in ASTM E145–94 (Reapproved 2001), "Standard Specification for Gravity-Convection and Forced-Ventilation Ovens" (incorporated by reference, see §63.14).

2.5 Electronic balance capable of weighing to ±0.0001 grams (0.1 mg).

2.6 Flat bottom weight (approximately 3 lbs) or clamps.

*Material and Apparatus Notes*

1—The foil, film, or sheet should be thick or rigid enough so that it can be easily handled in the test procedure.

3.0 Procedure

3.1 Two procedures are provided. In Procedure A the initial specimen weight is determined by weighing the foil, film, or sheet before and after the specimen is dispensed onto the foil, film, or sheet. In Procedure B the initial specimen weight is determined by weighing the adhesive cartridge (kit) before and after the specimen is dispensed.

3.2 At least four test specimens should be run for each test material. Run the test at room temperature, 74 degrees Fahrenheit (23 degrees Celsius).

*Procedure A*

1. Zero electronic balance.

2. Place 2 pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.

3. Record weight of aluminum foils. (A).

4. Tare balance.

5. Remove top piece of aluminum foil.

6. Dispense a 10 to 15 gram specimen of premixed adhesive onto bottom piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.

7. Record weight of sandwich (specimen and aluminum foils). (B).

8. Remove sandwich from scale, place sandwich between two support panels with aluminum spacers at the edges of the support panels to make a supported sandwich. The spacers provide a standard gap. Take care to mate the edges.

9. Place the supported sandwich on a flat surface.

10. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.

11. Allow to cure 24 hours.

12. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).

13. Bake sandwich at 110 degrees Celsius for 1 hour.

14. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature. Record post bake sandwich weight. (D).

*Procedure B*

1. Zero electronic balance.

2. Place two pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.

3. Record weight of aluminum foils. (A).

4. Tare balance.

5. Place one support panel on flat surface. Place first piece of aluminum foil on top of this support panel.

6. Record the weight of a pre-mixed sample of adhesive in its container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (F).

7. Dispense a 10 to 15 gram specimen of mixed adhesive onto the first piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.

8. Record weight of the adhesive container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (G).

9. Place the aluminum spacers at the edges of the bottom support panel polypropylene sheet. The spacers provide a standard gap.

10. Place the second support panel on top of the assembly to make a supported sandwich. Take care to mate the edges.

11. Place the supported sandwich on a flat surface.

12. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.

13. Allow to cure 24 hours.

14. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).

15. Bake sandwich at 110 degrees Celsius for 1 hour.

16. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature.

17. Record post-bake sandwich weight. (D).

*Procedural Notes*

1—The support panels may be omitted if the aluminum foil (or aluminum sheet, plastic film, or plastic sheet) will not tear and the adhesive specimen will spread to a uniform thickness within the sandwich when the flat weight is placed directly on top of the sandwich.

2—Clamps may be used instead of a flat bottom weight to spread the adhesive specimen to a uniform thickness within the sandwich.

3—When dispensing from a static mixer, purging is necessary to ensure uniform, homogeneous specimens. The weighing in Procedure B, Step 6 must be performed after any purging.

4—Follow the adhesive manufacturer's directions for mixing and for dispensing from a cartridge (kit).

4.0 Calculations

4.1 The total weight loss from curing and baking of each specimen is used to determine the weight percent volatile matter content of that specimen

*Procedure A*

Weight of original specimen (S) = (B) −(A)

Weight of post-bake specimen (P) = (D)−(A)

Total Weight Loss (L) = (S)−(P)

*Procedure B*

Weight of original specimen (S) = (F) −(G)

Weight of post-bake specimen (P) = (D)−(A)

Total Weight Loss (L) = (S)−(P)

*Procedure A and Procedure B*

Weight Percent Volatile Matter Content

(V) = [(Total weight loss)/(Initial specimen weight)] × 100 = [(L)/(S)] × 100

4.2 The weight volatile matter content of a material is the average of the weight volatile matter content of each specimen of that material. For example, if four specimens of a material were tested, then the weight percent volatile matter content for that material is:

V = [V1 + V2 + V3 + V4]/4

Where:

Vi = the weight percent volatile matter content of specimen i of the material.

4.3 The weight percent solids content of the material is calculated from the weight percent volatile content of the material.

Weight Percent Solids Content (N) = 100−(V)

*Calculation Notes*

1—The weight loss during curing and the weight loss during baking may be calculated separately. These values may be useful for identifying sources of variation in the results obtained for different specimens of the same material.

2—For both Procedure A and Procedure B, the weight loss during curing is (S) −[(C)−(A)] and the weight loss during baking is (C)−(D).

# Attachment B
# To Part 70 Operating Permit Renewal No.: T039-30817-00062

Title 40: Protection of Environment
Subpart MMMM—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

**Source:** 69 FR 157, Jan. 2, 2004, unless otherwise noted.

**What This Subpart Covers**

**§ 63.3880 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous metal parts and products surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

**§ 63.3881 Am I subject to this subpart?**

(a) Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and numerous other industrial, household, and consumer products. Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the surface coating of any miscellaneous metal parts or products, as described in paragraph (a)(1) of this section, and it includes the subcategories listed in paragraphs (a)(2) through (6) of this section.

(1) Surface coating is the application of coating to a substrate using, for example, spray guns or dip tanks. When application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these activities do not comprise surface coating if they are not directly related to the application of the coating. Coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart.

(2) The general use coating subcategory includes all surface coating operations that are not high performance, magnet wire, rubber-to-metal, or extreme performance fluoropolymer coating operations.

(3) The high performance coating subcategory includes surface coating operations that are performed using coatings that meet the definition of high performance architectural coating or high temperature coating in §63.3981.

(4) The magnet wire coating subcategory includes surface coating operations that are performed using coatings that meet the definition of magnet wire coatings in §63.3981.

(5) The rubber-to-metal coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of rubber-to-metal coatings in §63.3981.

(6) The extreme performance fluoropolymer coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of extreme performance fluoropolymer coatings in §63.3981.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.3882, that uses 946 liters (250 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products defined in paragraph (a) of this section; and that is a major source, is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is any stationary source or group of stationary sources located 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 (Mg) (10 tons) or

more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You do not need to include coatings that meet the definition of non-HAP coating contained in §63.3981 in determining whether you use 946 liters (250 gal) per year, or more, of coatings in the surface coating of miscellaneous metal parts and products.

(c) This subpart does not apply to surface coating or a coating operation that meets any of the criteria of paragraphs (c)(1) through (17) of this section.

(1) A coating operation conducted at a facility where the facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP, as determined according to §63.3941(a).

(2) Surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building, and facility maintenance operations, or that occur at hobby shops that are operated for noncommercial purposes.

(3) Coatings used in volumes of less than 189 liters (50 gal) per year, provided that the total volume of coatings exempt under this paragraph does not exceed 946 liters (250 gal) per year at the facility.

(4) The surface coating of metal parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).

(5) Surface coating where plastic is extruded onto metal wire or cable or metal parts or products to form a coating.

(6) Surface coating of metal components of wood furniture that meet the applicability criteria for wood furniture manufacturing (subpart JJ of this part).

(7) Surface coating of metal components of large appliances that meet the applicability criteria for large appliance surface coating (subpart NNNN of this part).

(8) Surface coating of metal components of metal furniture that meet the applicability criteria for metal furniture surface coating (subpart RRRR of this part).

(9) Surface coating of metal components of wood building products that meet the applicability criteria for wood building products surface coating (subpart QQQQ of this part).

(10) Surface coating of metal components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).

(11) Surface coating of metal parts intended for use in an aerospace vehicle or component using specialty coatings as defined in appendix A to subpart GG of this part.

(12) Surface coating of metal components of ships that meet the applicability criteria for shipbuilding and ship repair (subpart II of this part).

(13) Surface coating of metal using a web coating process that meets the applicability criteria for paper and other web coating (subpart JJJJ of this part).

(14) Surface coating of metal using a coil coating process that meets the applicability criteria for metal coil coating (subpart SSSS of this part).

(15) Surface coating of boats or metal parts of boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing facilities (subpart VVVV of this part), except where the surface coating of the boat is a metal coating operation performed on personal watercraft or parts of personal watercraft. This subpart does apply to metal coating operations performed on personal watercraft and parts of personal watercraft.

(16) Surface coating of assembled on-road vehicles that meet the applicability criteria for the assembled on-road vehicle subcategory in plastic parts and products surface coating (40 CFR part 63, subpart PPPP).

(17) Surface coating of metal components of automobiles and light-duty trucks that meets the applicability criteria in §63.3082(b) for the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) at a facility that meets the applicability criteria in §63.3081(b).

(d) If your facility meets the applicability criteria in §63.3081(b) of the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII), and you perform surface coating of metal parts or products that meets both the applicability criteria in §63.3082(c) and the applicability criteria of the Surface Coating of Miscellaneous Metal Parts and Products (40 CFR part 63, subpart MMMM), then for the surface coating of any or all of your metal parts or products that meets the applicability criteria in §63.3082(c), you may choose to comply with the requirements of subpart IIII of this part in lieu of complying with the Surface Coating of Miscellaneous Metal Parts and Products NESHAP. Surface coating operations on metal parts or products (e.g., parts for motorcycles or lawnmowers) not intended for use in automobiles, light-duty trucks, or other motor vehicles as defined in §63.3176 cannot be made part of your affected source under subpart IIII of this part.

(e) If you own or operate an affected source that meets the applicability criteria of this subpart and at the same facility you also perform surface coating that meets the applicability criteria of any other final surface coating NESHAP in this part you may choose to comply as specified in paragraph (e)(1), (2), or (3) of this section.

(1) You may have each surface coating operation that meets the applicability criteria of a separate NESHAP comply with that NESHAP separately.

(2) You may comply with the emission limitation representing the predominant surface coating activity at your facility, as determined according to paragraphs (e)(2)(i) and (ii) of this section. However, you may not establish high performance, rubber-to-metal, or extreme performance fluoropolymer coating operations as the predominant activity. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining the predominant surface coating activity at your facility.

(i) If a surface coating operation accounts for 90 percent or more of the surface coating activity at your facility (that is, the predominant activity), then compliance with the emission limitations of the predominant activity for all surface coating operations constitutes compliance with these and other applicable surface coating NESHAP. In determining predominant activity, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(ii) You must use liters (gal) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative volume of coating solids used from parameters other than coating consumption and volume solids content ( *e.g.,* design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and volume solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.3910(b). You must also determine predominant activity annually and include the determination in the next semi-annual compliance report required by §63.3920(a).

(3) You may comply with a facility-specific emission limit calculated from the relative amount of coating activity that is subject to each emission limit. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. The procedures for calculating the facility-specific emission limit are specified in §63.3890. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining a facility-specific emission limit for your facility. Coating activities that meet the applicability criteria of other

surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the calculation of the facility-specific emission limit but must be included in the compliance calculations.

[69 FR 157, Jan. 2, 2004, as amended at 69 FR 22660, Apr. 26, 2004; 71 FR 76927, Dec. 22, 2006]

**§ 63.3882 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new, reconstructed, and existing affected source within each of the four subcategories listed in §63.3881(a).

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of miscellaneous metal parts and products within each subcategory.

(1) All coating operations as defined in §63.3981;

(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(c) An affected source is a new affected source if you commenced its construction after August 13, 2002 and the construction is of a completely new miscellaneous metal parts and products surface coating facility where previously no miscellaneous metal parts and products surface coating facility had existed.

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

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

**§ 63.3883 When do I have to comply with this subpart?**

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) through (c) of this section. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in §§63.3940, 63.3950, and 63.3960.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is before January 2, 2004, the compliance date is January 2, 2004.

(2) If the initial startup of your new or reconstructed affected source occurs after January 2, 2004, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is the date 3 years after January 2, 2004.

(c) For an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP emissions, the compliance date is specified in paragraphs (c)(1) and (2) of this section.

(1) For any portion of the source that becomes a new or reconstructed affected source subject to this subpart, the compliance date is the date of initial startup of the affected source or January 2, 2004, whichever is later.

(2) For any portion of the source that becomes an existing affected source subject to this subpart, the compliance date is the date 1 year after the area source becomes a major source or 3 years after January 2, 2004, whichever is later.

(d) You must meet the notification requirements in §63.3910 according to the dates specified in that section and in subpart A of this part. Some of the notifications must be submitted before the compliance dates described in paragraphs (a) through (c) of this section.

**Emission Limitations**

**§ 63.3890 What emission limits must I meet?**

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (a)(1) through (5) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.3941, §63.3951, or §63.3961.

(1) For each new general use coating affected source, limit organic HAP emissions to no more than 0.23 kilograms (kg) (1.9 pound (lb)) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(2) For each new high performance coating affected source, limit organic HAP emissions to no more than 3.3 kg (27.5 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(3) For each new magnet wire coating affected source, limit organic HAP emissions to no more than 0.050 kg (0.44 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(4) For each new rubber-to-metal coating affected source, limit organic HAP emissions to no more than 0.81 kg (6.8 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(5) For each new extreme performance fluoropolymer coating affected source, limit organic HAP emissions to no more than 1.5 kg (12.4 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (b)(1) through (5) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.3941, §63.3951, or §63.3961.

(1) For each existing general use coating affected source, limit organic HAP emissions to no more than 0.31 kg (2.6 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(2) For each existing high performance coating affected source, limit organic HAP emissions to no more than 3.3 kg (27.5 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(3) For each existing magnet wire coating affected source, limit organic HAP emissions to no more than 0.12 kg (1.0 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(4) For each existing rubber-to-metal coating affected source, limit organic HAP emissions to no more than 4.5 kg (37.7 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(5) For each existing extreme performance fluoropolymer coating affected source, limit organic HAP emissions to no more than 1.5 kg (12.4 lbs) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(c) If your facility's surface coating operations meet the applicability criteria of more than one of the subcategory emission limits specified in paragraphs (a) or (b) of this section, you may comply separately with each subcategory emission limit or comply using one of the alternatives in paragraph (c)(1) or (2) of this section.

(1) If the general use or magnet wire surface coating operations subject to only one of the emission limits specified in paragraphs (a)(1), (3), (b)(1), or (3) of this section account for 90 percent or more of the surface coating activity at your facility ( *i.e.,* it is the predominant activity at your facility), then compliance with that one emission limitations in this

subpart for all surface coating operations constitutes compliance with the other applicable emission limits. You must use liters (gal) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative volume of coating solids used from parameters other than coating consumption and volume solids content ( *e.g.,* design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and volume solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.3910(b). Additionally, you must determine the facility's predominant activity annually and include the determination in the next semi-annual compliance report required by §63.3920(a).

(2) You may calculate and comply with a facility-specific emission limit as described in paragraphs (c)(2)(i) through (iii) of this section. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of the other subcategories and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(i) You are required to calculate the facility-specific emission limit for your facility when you submit the notification of compliance status required in §63.3910(c), and on a monthly basis afterward using the coating data for the relevant 12-month compliance period.

(ii) Use Equation 1 of this section to calculate the facility-specific emission limit for your surface coating operations for each 12-month compliance period.

$$\textit{Facility-Specific}\ \text{Emission Limit} = \frac{\sum_{i=1}^{n}(\text{Limit}_i)(\textit{Solids}_i)}{\sum_{i=1}^{n}(\textit{Solids}_i)} \qquad (\textit{Eq. } 1)$$

Where:

Facility-specific emission limit = Facility-specific emission limit for each 12-month compliance period, kg (lb) organic HAP per kg (lb) coating solids used.

$\text{Limit}_i$= The new source or existing source emission limit applicable to coating operation, i, included in the facility-specific emission limit, converted to kg (lb) organic HAP per kg (lb) coating solids used, if the emission limit is not already in those units. All emission limits included in the facility-specific emission limit must be in the same units.

$\text{Solids}_i$= The liters (gal) of solids used in coating operation, i, in the 12-month compliance period that is subject to emission limit, i. You may estimate the volume of coating solids used from parameters other than coating consumption and volume solids content ( *e.g.,* design specifications for the parts or products coated and the number of items produced). The use of parameters other than coating consumption and volume solids content must be approved by the Administrator.

n = The number of different coating operations included in the facility-specific emission limit.

(iii) If you need to convert an emission limit in another surface coating NESHAP from kg (lb) organic HAP per kg (lb) coating solids used to kg (lb) organic HAP per liter (gal) coating solids used, you must use the default solids density of 1.26 kg solids per liter coating solids (10.5 lb solids per gal solids).

**§ 63.3891 What are my options for meeting the emission limits?**

You must include all coatings (as defined in §63.3981), thinners and/or other additives, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in §63.3890. To make this determination, you must use at least one of the three compliance options listed in paragraphs (a) through (c) of this section. You may apply any of the compliance options to an individual coating operation, or to multiple coating operations as a group, or to the entire affected source. You may use different compliance options for different coating operations, or at different times on the same coating operation. You may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by §63.3930(c), and you must report it in the next semiannual compliance report required in §63.3920.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in §63.3890, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. You must meet all the requirements of §§63.3940, 63.3941, and 63.3942 to demonstrate compliance with the applicable emission limit using this option.

(b) *Emission rate without add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.3890, calculated as a rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§63.3950, 63.3951, and 63.3952 to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), and the emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.3890, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in §63.3892, except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j), and that you meet the work practice standards required in §63.3893. You must meet all the requirements of §§63.3960 through 63.3968 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

**§ 63.3892 What operating limits must I meet?**

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation(s) on which you use the emission rate with add-on controls option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to §63.3961(j), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in §63.3967. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under §63.8(f).

**§ 63.3893 What work practice standards must I meet?**

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any work practice standards.

(b) If you use the emission rate with add-on controls option, you must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners and/or other additives,

and cleaning materials used in, and waste materials generated by the controlled coating operation(s) for which you use this option; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

(1) All organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be stored in closed containers.

(2) Spills of organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be minimized.

(3) Organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.

(4) Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.

(5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

(c) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the work practice standards in this section.

**General Compliance Requirements**

**§ 63.3900 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations in this subpart as specified in paragraphs (a)(1) and (2) of this section.

(1) Any coating operation(s) for which you use the compliant material option or the emission rate without add-on controls option, as specified in §63.3891(a) and (b), must be in compliance with the applicable emission limit in §63.3890 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in §63.3891(c), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in §63.3890 at all times except during periods of startup, shutdown, and malfunction.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by §63.3892 at all times except during periods of startup, shutdown, and malfunction, and except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j).

(iii) The coating operation(s) must be in compliance with the work practice standards in §63.3893 at all times.

(b) You must always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in §63.6(e)(1)(i).

(c) If your affected source uses an emission capture system and add-on control device, you must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The plan must address the startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

[69 FR 157, Jan. 2, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

**§ 63.3901 What parts of the General Provisions apply to me?**

Table 2 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

**Notifications, Reports, and Records**

**§ 63.3910 What notifications must I submit?**

(a) *General.* You must submit the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to you by the dates specified in those sections, except as provided in paragraphs (b) and (c) of this section.

(b) *Initial Notification.* You must submit the initial notification required by §63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after January 2, 2004, whichever is later. For an existing affected source, you must submit the initial notification no later than 1 year after January 2, 2004. If you are using compliance with the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (subpart IIII of this part) as provided for under §63.3881(d) to constitute compliance with this subpart for any or all of your metal parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those metal parts coating operations. If you are complying with another NESHAP that constitutes the predominant activity at your facility under §63.3881(e)(2) to constitute compliance with this subpart for your metal parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those metal parts coating operations.

(c) *Notification of compliance status.* You must submit the notification of compliance status required by §63.9(h) no later than 30 calendar days following the end of the initial compliance period described in §§63.3940, 63.3950, or 63.3960 that applies to your affected source. The notification of compliance status must contain the information specified in paragraphs (c)(1) through (11) of this section and in §63.9(h).

(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 the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in §§63.3940, 63.3950, or 63.3960 that applies to your affected source.

(4) Identification of the compliance option or options specified in §63.3891 that you used on each coating operation in the affected source during the initial compliance period.

(5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

(6) If you had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of this section.

(i) A description and statement of the cause of the deviation.

(ii) If you failed to meet the applicable emission limit in §63.3890, include all the calculations you used to determine the kg (lb) of organic HAP emitted per liter (gal) coating solids used. You do not need to submit information provided by the materials' suppliers or manufacturers, or test reports.

(7) For each of the data items listed in paragraphs (c)(7)(i) through (iv) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data may include a copy of the information provided by the supplier or manufacturer of the example coating or material, or a summary of the results of testing conducted according to §63.3941(a), (b), or (c). You do not need to submit copies of any test reports.

(i) Mass fraction of organic HAP for one coating, for one thinner and/or other additive, and for one cleaning material.

(ii) Volume fraction of coating solids for one coating.

(iii) Density for one coating, one thinner and/or other additive, and one leaning material, except that if you use the compliant material option, only the example coating density is required.

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of §63.3951.

(8) The calculation of kg (lb) of organic HAP emitted per liter (gal) coating solids used for the compliance option(s) you used, as specified in paragraphs (c)(8)(i) through (iii) of this section.

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 2 of §63.3941.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month; the calculation of the total volume of coating solids used each month; and the calculation of the 12-month organic HAP emission rate using Equations 1 and 1A through 1C, 2, and 3, respectively, of §63.3951.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month, using Equations 1 and 1A through 1C of §63.3951; the calculation of the total volume of coating solids used each month using Equation 2 of §63.3951; the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.3961 and Equations 2, 3, and 3A through 3C of §63.3961 as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.3961; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.3961.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section, except that the requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

(ii) A summary of the results of each add-on control device performance test. You do not need to submit complete test reports.

(iii) A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

(iv) A statement of whether or not you developed and implemented the work practice plan required by §63.3893.

(10) If you are complying with a single emission limit representing the predominant activity under §63.3890(c)(1), include the calculations and supporting information used to demonstrate that this emission limit represents the predominant activity as specified in §63.3890(c)(1).

(11) If you are complying with a facility-specific emission limit under §63.3890(c)(2), include the calculation of the facility-specific emission limit and any supporting information as specified in §63.3890(c)(2).

[69 FR 157, Jan. 2, 2004, as amended at 69 FR 22660, Apr. 26, 2004]

**§ 63.3920 What reports must I submit?**

(a) *Semiannual compliance reports.* You must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (7) of this section. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(2) of this section.

(1) *Dates.* Unless the Administrator has approved or agreed to a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in §63.3940, §63.3950, or §63.3960 that applies to your affected source and ends on June 30 or December 31, whichever date is the first date following the end of the initial compliance period.

(ii) Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iii) Each semiannual 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.

(iv) 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 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 date specified in paragraph (a)(1)(iii) of this section.

(2) *Inclusion with title V report.* 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 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section 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 semiannual compliance report includes all required information concerning deviations from any emission limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(3) *General requirements.* The semiannual compliance report must contain the information specified in paragraphs (a)(3)(i) through (vii) of this section, and the information specified in paragraphs (a)(4) through (7) and (c)(1) of this section that is applicable to your affected source.

(i) Company name and address.

(ii) 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.

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(iv) Identification of the compliance option or options specified in §63.3891 that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates for each option you used.

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls compliance option (§63.3891(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(vi) If you used the predominant activity alternative (§63.3890(c)(1)), include the annual determination of predominant activity if it was not included in the previous semi-annual compliance report.

(vii) If you used the facility-specific emission limit alternative (§63.3890(c)(2)), include the calculation of the facility-specific emission limit for each 12-month compliance period during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§63.3890, 63.3892, and 63.3893 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out-of-control as specified in §63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out-of-control during the reporting period.

(5) *Deviations: Compliant material option.* If you used the compliant material option and there was a deviation from the applicable organic HAP content requirements in §63.3890, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

(i) Identification of each coating used that deviated from the applicable emission limit, and each thinner and/or other additive, and cleaning material used that contained organic HAP, and the dates and time periods each was used.

(ii) The calculation of the organic HAP content (using Equation 2 of §63.3941) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation ( *e.g.,* information provided by coating suppliers or manufacturers, or test reports).

(iii) The determination of mass fraction of organic HAP for each thinner and/or other additive, and cleaning material identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation ( *e.g.,* information provided by material suppliers or manufacturers, or test reports).

(iv) A statement of the cause of each deviation.

(6) *Deviations: Emission rate without add-on controls option.* If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in §63.3890, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3890.

(ii) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A through 1C, 2, and 3 of §63.3951; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4). You do not need to submit background data supporting these calculations ( *e.g.,* information provided by materials suppliers or manufacturers, or test reports).

(iii) A statement of the cause of each deviation.

(7) *Deviations: Emission rate with add-on controls option.* If you used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (xiv) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3890.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.3951; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2 of §63.3951; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.3961, and Equations 2, 3, and 3A through 3C of §63.3961, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.3961; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.3961. You do not need to submit the background data supporting these calculations ( *e.g.,* information provided by materials suppliers or manufacturers, or test reports).

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

(iv) A brief description of the CPMS.

(v) The date of the latest CPMS certification or audit.

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

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

(viii) The date and time period of each deviation from an operating limit in Table 1 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 1 to this subpart and each bypass of the add-on control device during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 1 of this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(xi) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

(xii) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.

(xiii) For each deviation from the work practice standards, a description of the deviation, the date and time period of the deviation, and the actions you took to correct the deviation.

(xiv) A statement of the cause of each deviation.

(b) *Performance test reports.* If you use the emission rate with add-on controls option, you must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in §63.10(d)(2).

(c) *Startup, shutdown, malfunction reports.* If you used the emission rate with add-on controls option and you had a startup, shutdown, or malfunction during the semiannual reporting period, you must submit the reports specified in paragraphs (c)(1) and (2) of this section.

(1) If your actions were consistent with your startup, shutdown, and malfunction plan, you must include the information specified in §63.10(d) in the semiannual compliance report required by paragraph (a) of this section.

(2) If your actions were not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report as described in paragraphs (c)(2)(i) and (ii) of this section.

(i) You must describe the actions taken during the event in a report delivered by facsimile, telephone, or other means to the Administrator within 2 working days after starting actions that are inconsistent with the plan.

(ii) You must submit a letter to the Administrator within 7 working days after the end of the event, unless you have made alternative arrangements with the Administrator as specified in §63.10(d)(5)(ii). The letter must contain the information specified in §63.10(d)(5)(ii).

**§ 63.3930 What records must I keep?**

You must collect and keep records of the data and information specified in this section. Failure to collect and keep these records is a deviation from the applicable standard.

(a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report. If you are using the predominant activity alternative under §63.3890(c), you must keep records of the data and calculations used to determine the predominant activity. If you are using the facility-specific emission limit alternative under §63.3890(c), you must keep records of the data used to calculate the facility-specific emission limit for the initial compliance demonstration. You must also keep records of any data used in each annual predominant activity determination and in the calculation of the facility-specific emission limit for each 12-month compliance period included in the semi-annual compliance reports.

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the volume fraction of coating solids for each coating. If you conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each compliance period, the records specified in paragraphs (c)(1) through (4) of this section.

(1) A record of the coating operations on which you used each compliance option and the time periods (beginning and ending dates and times) for each option you used.

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 2 of §63.3941.

(3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2 of §63.3951; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2 of §63.3951; and the calculation of each 12-month organic HAP emission rate using Equation 3 of §63.3951.

(4) For the emission rate with add-on controls option, records of the calculations specified in paragraphs (c)(4)(i) through (v) of this section.

(i) The calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.3951 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4);

(ii) The calculation of the total volume of coating solids used each month using Equation 2 of §63.3951;

(iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.3961 and Equations 2, 3, and 3A through 3C of §63.3961, as applicable;

(iv) The calculation of each month's organic HAP emission rate using Equation 4 of §63.3961; and

(v) The calculation of each 12-month organic HAP emission rate using Equation 5 of §63.3961.

(d) A record of the name and volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period. If you are using the compliant material option for all coatings at the source, you may maintain purchase records for each material used rather than a record of the volume used.

(e) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight.

(f) A record of the volume fraction of coating solids for each coating used during each compliance period.

(g) If you use either the emission rate without add-on controls or the emission rate with add-on controls compliance option, the density for each coating, thinner and/or other additive, and cleaning material used during each compliance period.

(h) If you use an allowance in Equation 1 of §63.3951 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to §63.3951(e)(4), you must keep records of the information specified in paragraphs (h)(1) through (3) of this section.

(1) The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1 of §63.3951; a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility; and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of §63.3951.

(3) The methodology used in accordance with §63.3951(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(i) [Reserved]

(j) You must keep records of the date, time, and duration of each deviation.

(k) If you use the emission rate with add-on controls option, you must keep the records specified in paragraphs (k)(1) through (8) of this section.

(1) For each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) The records required to show continuous compliance with each operating limit specified in Table 1 to this subpart that applies to you.

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in §63.3965(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§63.3964 and 63.3965(b) through (e), including the records specified in paragraphs (k)(5)(i) through (iii) of this section that apply to you.

(i) *Records for a liquid-to-uncaptured gas protocol using a temporary total enclosure or building enclosure.* Records of the mass of total volatile hydrocarbon (TVH) as measured by Method 204A or 204F of appendix M to 40 CFR part 51 for each material used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(ii) *Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.* Records of the mass of TVH emissions captured by the emission capture system as measured by Method 204B or 204C of appendix M to 40 CFR part 51 at the inlet to the add-on control device, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in §63.3965(e), if applicable.

(6) The records specified in paragraphs (k)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.3966.

(i) Records of each add-on control device performance test conducted according to §§63.3964 and 63.3966.

(ii) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.

(7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in §63.3967 and to document compliance with the operating limits as specified in Table 1 to this subpart.

(8) A record of the work practice plan required by §63.3893 and documentation that you are implementing the plan on a continuous basis.

**§ 63.3931 In what form and for 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). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(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 may keep the records off-site for the remaining 3 years.

**Compliance Requirements for the Compliant Material Option**

**§ 63.3940 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements in §63.3941. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on

the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through that month plus the next 12 months. The initial compliance demonstration includes the calculations according to §63.3941 and supporting documentation showing that during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limit in §63.3890, and that you used no thinners and/or other additives, or cleaning materials that contained organic HAP as determined according to §63.3941(a).

**§ 63.3941 How do I demonstrate initial compliance with the emission limitations?**

You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the emission rate without add-on controls option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limits in §63.3890 and must use no thinner and/or other additive, or cleaning material that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§63.3892 and 63.3893, respectively. You must conduct a separate initial compliance demonstration for each general use, high performance, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. Use the procedures in this section on each coating, thinner and/or other additive, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the organic HAP content of coatings, thinners and/or other additives, and cleaning materials that are reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

(a) *Determine the mass fraction of organic HAP for each material used.* You must determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during the compliance period by using one of the options in paragraphs (a)(1) through (5) of this section.

(1) *Method 311 (appendix A to 40 CFR part 63).* You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when performing a Method 311 test.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point ( *e.g.,* 0.3791).

(ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point ( *e.g.,* 0.763).

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may use the alternative method contained in appendix A to subpart PPPP of this part, rather than Method 24. You may use the volatile fraction that is emitted, as measured by the alternative method in appendix A to subpart PPPP of this part, as a substitute for the mass fraction of organic HAP.

(3) *Alternative method.* You may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data,

if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of this section, then the test method results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 3 or 4 to this subpart. If you use the tables, you must use the values in Table 3 for all solvent blends that match Table 3 entries according to the instructions for Table 3, and you may use Table 4 only if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 and you know only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (appendix A to 40 CFR part 63) test indicate higher values than those listed on Table 3 or 4 to this subpart, the Method 311 results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters (gal) of coating solids per liter (gal) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified in paragraphs (b)(1) through (4) of this section. If test results obtained according to paragraph (b)(1) of this section do not agree with the information obtained under paragraph (b)(3) or (4) of this section, the test results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(1) *ASTM Method D2697–86 (Reapproved 1998) or ASTM Method D6093–97 (Reapproved 2003).* You may use ASTM Method D2697–86 (Reapproved 1998), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” (incorporated by reference, see §63.14), or ASTM Method D6093–97 (Reapproved 2003), “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” (incorporated by reference, see §63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

(2) *Alternative method.* You may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(3) *Information from the supplier or manufacturer of the material.* You may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.

(4) *Calculation of volume fraction of coating solids.* You may determine the volume fraction of coating solids using Equation 1 of this section:

$$V_s = 1 - \frac{m_{volatiles}}{D_{avg}} \qquad (Eq.\ 1)$$

Where:

$V_s$= Volume fraction of coating solids, liters (gal) coating solids per liter (gal) coating.

$m_{volatiles}$= Total volatile matter content of the coating, including HAP, volatile organic compounds (VOC), water, and exempt compounds, determined according to Method 24 in appendix A of 40 CFR part 60, grams volatile matter per liter coating.

$D_{avg}$= Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and other information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(c) *Determine the density of each coating.* Determine the density of each coating used during the compliance period from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or specific gravity data for pure chemicals. If there is disagreement between ASTM Method D1475–98 test results and the supplier's or manufacturer's information, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) *Determine the organic HAP content of each coating.* Calculate the organic HAP content, kg (lb) of organic HAP emitted per liter (gal) coating solids used, of each coating used during the compliance period using Equation 2 of this section:

$$H_c = \frac{(D_c)(W_c)}{V_s} \qquad (Eq.\ 2)$$

Where:

$H_c$= Organic HAP content of the coating, kg organic HAP emitted per liter (gal) coating solids used.

$D_c$= Density of coating, kg coating per liter (gal) coating, determined according to paragraph (c) of this section.

$W_c$= Mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to paragraph (a) of this section.

$V_s$= Volume fraction of coating solids, liter (gal) coating solids per liter (gal) coating, determined according to paragraph (b) of this section.

(e) *Compliance demonstration.* The calculated organic HAP content for each coating used during the initial compliance period must be less than or equal to the applicable emission limit in §63.3890; and each thinner and/or other additive, and cleaning material used during the initial compliance period must contain no organic HAP, determined according to paragraph (a) of this section. You must keep all records required by §§63.3930 and 63.3931. As part of the notification of compliance status required in §63.3910, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.3890, and you used no thinners and/or other additives, or cleaning materials that contained organic HAP, determined according to the procedures in paragraph (a) of this section.

**§ 63.3942 How do I demonstrate continuous compliance with the emission limitations?**

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content (determined using Equation 2 of §63.3941) exceeds the applicable emission limit in §63.3890, and use no thinner and/or other additive, or cleaning material that contains organic HAP, determined according to §63.3941(a). A compliance period consists of 12 months. Each month, after the end of the initial compliance period described in §63.3940, is the end of a compliance period consisting of that month and the preceding 11 months. If you are complying with a facility-specific emission limit under §63.3890(c), you must also perform the calculation using Equation 1 in §63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner and/or other additive, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(5).

(c) As part of each semiannual compliance report required by §63.3920, you must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the applicable emission limit in §63.3890, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.3890, and you used no thinner and/or other additive, or cleaning material that contained organic HAP, determined according to §63.3941(a).

(d) You must maintain records as specified in §§63.3930 and 63.3931.

**Compliance Requirements for the Emission Rate Without Add-On Controls Option**

**§ 63.3950 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3951. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the calculations according to §63.3951 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3890.

**§ 63.3951 How do I demonstrate initial compliance with the emission limitations?**

You may use the emission rate without add-on controls option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the compliant material option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or group of coating operations must meet the applicable emission limit in §63.3890, but is not required to meet the operating limits or work practice standards in §§63.3892 and 63.3893, respectively. You must conduct a separate initial compliance demonstration for each general use, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the emission rate without add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month according to the requirements in §63.3941(a).

(b) *Determine the volume fraction of coating solids.* Determine the volume fraction of coating solids (liter (gal) of coating solids per liter (gal) of coating) for each coating used during each month according to the requirements in §63.3941(b).

(c) *Determine the density of each material.* Determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If you are including powder coatings in the compliance determination, determine the density of powder coatings, using ASTM Method D5965–02, “Standard Test Methods for Specific Gravity of Coating Powders”

(incorporated by reference, see §63.14), or information from the supplier. If there is disagreement between ASTM Method D1475–98 or ASTM Method D5965–02 test results and other such information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(d) *Determine the volume of each material used.* Determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, and 1C of this section.

(e) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using Equation 1 of this section.

$$H_e = A + B + C - R_w \qquad (Eq.\ 1)$$

Where:

$H_e$= Total mass of organic HAP emissions during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg, as calculated in Equation 1B of this section.

C = Total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.

$R_w$= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, kg, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to $R_w$if you do not wish to use this allowance.)

(1) Calculate the kg organic HAP in the coatings used during the month using Equation 1A of this section:

$$A = \sum_{i=1}^{m} (Vol_{c,i})(D_{c,i})(W_{c,i}) \qquad (Eq.\ 1A)$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kg coating per liter coating.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

m = Number of different coatings used during the month.

(2) Calculate the kg of organic HAP in the thinners and/or other additives used during the month using Equation 1B of this section:

$$B = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad (Eq.\ 1B)$$

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

n = Number of different thinners and/or other additives used during the month.

(3) Calculate the kg organic HAP in the cleaning materials used during the month using Equation 1C of this section:

$$C = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad (Eq.\ 1C)$$

Where:

C = Total mass of organic HAP in the cleaning materials used during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material.

p = Number of different cleaning materials used during the month.

(4) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of this section, then you must determine the mass according to paragraphs (e)(4)(i) through (iv) of this section.

(i) You may only include waste materials in the determination that are generated by coating operations in the affected source for which you use Equation 1 of this section and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. You may not include organic HAP contained in wastewater.

(ii) You must determine either the amount of the waste materials sent to a TSDF during the month or the amount collected and stored during the month and designated for future transport to a TSDF. Do not include in your determination any waste materials sent to a TSDF during a month if you have already included them in the amount collected and stored during that month or a previous month.

(iii) Determine the total mass of organic HAP contained in the waste materials specified in paragraph (e)(4)(ii) of this section.

(iv) You must document the methodology you use to determine the amount of waste materials and the total mass of organic HAP they contain, as required in §63.3930(h). If waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(f) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month, using Equation 2 of this section:

$$V_{st} = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(V_{s,i}\right) \qquad (Eq.\ 2)$$

Where:

$V_{st}$= Total volume of coating solids used during the month, liters.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$V_{s,i}$= Volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to §63.3941(b).

m = Number of coatings used during the month.

(g) *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the compliance period, kg (lb) organic HAP emitted per liter (gal) coating solids used, using Equation 3 of this section:

$$H_{yr} = \frac{\sum_{y=1}^{n} H_e}{\sum_{y=1}^{n} V_{st}} \qquad (Eq.\ 3)$$

Where:

$H_{yr}$= Average organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

$H_e$= Total mass of organic HAP emissions from all materials used during month, y, kg, as calculated by Equation 1 of this section.

$V_{st}$= Total volume of coating solids used during month, y, liters, as calculated by Equation 2 of this section.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(h) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period calculated using Equation 3 of this section must be less than or equal to the applicable emission limit for each subcategory in §63.3890 or the predominant activity or facility-specific emission limit allowed in §63.3890(c). You must keep all records as required by §§63.3930 and 63.3931. As part of the notification of compliance status required by §63.3910, you must identify the coating operation(s) for which you used the emission rate without add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.3890, determined according to the procedures in this section.

**§ 63.3952 How do I demonstrate continuous compliance with the emission limitations?**

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to §63.3951(a) through (g), must be less than or equal to the applicable emission limit in §63.3890. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3950 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.3951(a) through (g) on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.3890(c), you must also perform the calculation using Equation 1 in §63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.3890, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(6).

(c) As part of each semiannual compliance report required by §63.3920, you must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3890, determined according to §63.3951(a) through (g).

(d) You must maintain records as specified in §§63.3930 and 63.3931.

**Compliance Requirements for the Emission Rate With Add-On Controls Option**

**§ 63.3960 By what date must I conduct performance tests and other initial compliance demonstrations?**

(a) *New and reconstructed affected sources.* For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j), you must conduct a performance test of each capture system and add-on control device according to §§63.3964, 63.3965, and 63.3966 and establish the operating limits required by §63.3892 no later than 180 days after the applicable compliance date specified in §63.3883. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.3961(j), you must initiate the first material balance no later than the applicable compliance date specified in §63.3883. For magnet wire coating operations you may, with approval, conduct a performance test of one representative magnet wire coating machine for each group of identical or very similar magnet wire coating machines.

(2) You must develop and begin implementing the work practice plan required by §63.3893 no later than the compliance date specified in §63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3961. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to §63.3961(j); calculations according to §63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3968; and documentation of whether you developed and implemented the work practice plan required by §63.3893.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.3892 until after you have completed the performance tests specified in paragraph (a)(1) of this section.

Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. For magnet wire coating operations, you must begin complying with the operating limits for all identical or very similar magnet wire coating machines on the date you complete the performance test of a representative magnet wire coating machine. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in §63.3961(j).

(b) *Existing affected sources.* For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3883. Except for magnet wire coating operations and solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§63.3964, 63.3965, and 63.3966 and establish the operating limits required by §63.3892 no later than the compliance date specified in §63.3883. For magnet wire coating operations, you may, with approval, conduct a performance test of a single magnet wire coating machine that represents identical or very similar magnet wire coating machines. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.3961(j), you must initiate the first material balance no later than the compliance date specified in §63.3883.

(2) You must develop and begin implementing the work practice plan required by §63.3893 no later than the compliance date specified in §63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3961. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to §63.3961(j); calculations according to §63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3968; and documentation of whether you developed and implemented the work practice plan required by §63.3893.

(c) You are not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if you receive approval to use the results of a performance test that has been previously conducted on that capture system or control device. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of this section.

(1) The previous test must have been conducted using the methods and conditions specified in this subpart.

(2) Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.

(3) Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.

**§ 63.3961 How do I demonstrate initial compliance?**

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected

source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§63.3890, 63.3892, and 63.3893. You must conduct a separate initial compliance demonstration for each general use, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation, unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed onsite (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coatings operation(s) for which you use the emission rate with add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(b) *Compliance with operating limits.* Except as provided in §63.3960(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of paragraph (j) of this section, you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.3892, using the procedures specified in §§63.3967 and 63.3968.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by §63.3893 during the initial compliance period, as specified in §63.3930.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in §63.3890 for each affected source in each subcategory.

(e) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in §63.3951(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner and/or other additive, and cleaning material used during each month; and the volume fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of §63.3951, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners and/or other additives, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(g) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (h) of this section to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balance.* Use Equation 1 of this section to calculate the organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. You must assume zero efficiency for the emission capture system and add-on control device for any period of time a deviation specified in §63.3963(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_C = \left(A_C + B_C + C_C - R_W - H_{UNC}\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) \qquad (Eq.\ 1)$$

Where:

$H_C$= Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

$A_C$= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.

$B_C$= Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.

$C_C$= Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, as calculated in Equation 1C of this section.

$R_W$= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to §63.3951(e)(4). (You may assign a value of zero to $R_W$if you do not wish to use this allowance.)

$H_{UNC}$= Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.3963(c) and (d) that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.3964 and 63.3965 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.3964 and 63.3966 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg (lb), using Equation 1A of this section:

$$A_C = \sum_{i=1}^{m}\left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad (Eq.\ 1A)$$

Where:

$A_C$= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kg per liter.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg per kg. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

m = Number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners and/or other additives used in the controlled coating operation, kg (lb), using Equation 1B of this section:

$$B_C = \sum_{j=1}^{n} (Vol_{t,j})(D_{t,j})(W_{t,j}) \qquad (Eq.\ 1B)$$

Where:

$B_C$= Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg per kg. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

n = Number of different thinners and/or other additives used.

(3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg (lb), using Equation 1C of this section:

$$C_C = \sum_{k=1}^{p} (Vol_{s,k})(D_{s,k})(W_{s,k}) \qquad (Eq.\ 1C)$$

Where:

$C_C$= Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg per kg.

p = Number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used in the controlled coating operation during deviations specified in §63.3963(c) and (d), using Equation 1D of this section:

$$H_{UNC} = \sum_{h=1}^{q} (Vol_h)(D_h)(W_h) \qquad (Eq.\ 1D)$$

Where:

$H_{UNC}$= Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.3963(c) and (d) that occurred during the month in the controlled coating operation, kg.

$Vol_h$= Total volume of coating, thinner and/or other additive, or cleaning material, h, used in the controlled coating operation during deviations, liters.

$D_h$= Density of coating, thinner and/or other additives, or cleaning material, h, kg per liter.

$W_h$= Mass fraction of organic HAP in coating, thinner and/or other additives, or cleaning material, h, kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

q = Number of different coatings, thinners and/or other additives, and cleaning materials used.

(i) [Reserved]

(j) *Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (j)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (j)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, based on measurement with the device required in paragraph (j)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to §63.3951(c).

(5) Measure the volume of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.

(6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i WV_{c,i} + \sum_{j=1}^{n} Vol_j D_j WV_{t,j} + \sum_{k=1}^{p} Vol_k D_k WV_{s,k}} \qquad (Eq.\ 2)$$

Where:

$R_V$= Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

$M_{VR}$= Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

$Vol_i$= Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_i$= Density of coating, i, kg per liter.

$WV_{c,i}$= Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

$Vol_j$= Volume of thinner and/or other additive, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_j$= Density of thinner and/or other additive, j, kg per liter.

$WV_{t,j}$= Mass fraction of volatile organic matter for thinner and/or other additive, j, kg volatile organic matter per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

$Vol_k$= Volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_k$= Density of cleaning material, k, kg per liter.

$WV_{s,k}$= Mass fraction of volatile organic matter for cleaning material, k, kg volatile organic matter per kg cleaning material.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month.

p = Number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equation 3 of this section and according to paragraphs (j)(7)(i) through (iii) of this section:

$$H_{CSR} = \left(A_{CSR} + B_{CSR} + C_{CSR}\right)\left(\frac{R_V}{100}\right) \qquad (Eq.\ 3)$$

Where:

$H_{CSR}$= Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

$A_{CSR}$= Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A of this section.

$B_{CSR}$= Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

$C_{CSR}$= Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3C of this section.

$R_V$= Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

$$A_{CSR} = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad (Eq.\ 3A)$$

Where:

$A_{CSR}$= Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{c,i}$= Density of coating, i, kg per liter.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

m = Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section:

$$B_{CSR} = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad (Eq.\ 3B)$$

Where:

$B_{CSR}$= Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg lb organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

n = Number of different thinners and/or other additives used.

(iii) Calculate the mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg, using Equation 3C of this section:

$$C_{CSR} = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad (Eq.\ 3C)$$

Where:

$C_{CSR}$= Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg cleaning material.

p = Number of different cleaning materials used.

(k) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of §63.3951.

(l) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 4 of this section:

$$H_{HAP} = H_e - \sum_{i=1}^{q}\left(H_{c,i}\right) - \sum_{j=1}^{r}\left(H_{CSR,j}\right) \qquad (Eq.\ 4)$$

where:

$H_{HAP}$= Total mass of organic HAP emissions for the month, kg.

$H_e$= Total mass of organic HAP emissions before add-on controls from all the coatings, thinners and/or other additives, and cleaning materials used during the month, kg, determined according to paragraph (f) of this section.

$H_{C,i}$= Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.

$H_{CSR,j}$= Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 3 of this section.

q = Number of controlled coating operations not controlled by a solvent recovery system using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

(m) *Calculate the organic HAP emission rate for the compliance period.* Determine the organic HAP emission rate for the compliance period, kg (lb) of organic HAP emitted per liter (gal) coating solids used, using Equation 5 of this section:

$$H_{annual} = \frac{\sum_{y=1}^{n} H_{HAP,y}}{\sum_{y=1}^{n} V_{st,y}} \qquad (Eq.\ 5)$$

Where:

$H_{annual}$= Organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

$H_{HAP,y}$= Organic HAP emissions for month, y, kg, determined according to Equation 4 of this section.

$V_{st,y}$= Total volume of coating solids used during month, y, liters, from Equation 2 of §63.3951.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(n) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit for each subcategory in §63.3890 or the predominant activity or facility-specific emission limit allowed in §63.3890(c). You must keep all records as required by §§63.3930 and 63.3931. As part of the notification of compliance status required by §63.3910, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.3890, and you achieved the operating limits required by §63.3892 and the work practice standards required by §63.3893.

**§ 63.3962 [Reserved]**

**§ 63.3963 How do I demonstrate continuous compliance with the emission limitations?**

(a) To demonstrate continuous compliance with the applicable emission limit in §63.3890, the organic HAP emission rate for each compliance period, determined according to the procedures in §63.3961, must be equal to or less than the applicable emission limit in §63.3890. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3960 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.3961 on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.3890(c), you must also perform the calculation using Equation 1 in §63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.3890, this is a deviation from the emission limitation for that compliance period that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by §63.3892 that applies to you, as specified in Table 1 to this subpart, when the coating line is in operation.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator.

(d) You must meet the requirements for bypass lines in §63.3968(b) for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7). For the purposes of completing the compliance calculations specified in §§63.3961(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of §63.3961.

(e) You must demonstrate continuous compliance with the work practice standards in §63.3893. If you did not develop a work practice plan, or you did not implement the plan, or you did not keep the records required by §63.3930(k)(8),

this is a deviation from the work practice standards that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7).

(f) As part of each semiannual compliance report required in §63.3920, you must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3890, and you achieved the operating limits required by §63.3892 and the work practice standards required by §63.3893 during each compliance period.

(g)—(i) [Reserved]

(j) You must maintain records as specified in §§63.3930 and 63.3931.

[69 FR 157, Jan. 2, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

**§ 63.3964 What are the general requirements for performance tests?**

(a) You must conduct each performance test required by §63.3960 according to the requirements in §63.7(e)(1) and under the conditions in this section, unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(2) *Representative emission capture system and add-on control device operating conditions.* You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an emission capture system according to the requirements in §63.3965. You must conduct each performance test of an add-on control device according to the requirements in §63.3966.

**§ 63.3965 How do I determine the emission capture system efficiency?**

You must use the procedures and test methods in this section to determine capture efficiency as part of the performance test required by §63.3960.

(a) *Assuming 100 percent capture efficiency.* You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of this section are met:

(1) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All coatings, thinners and/or other additives, and cleaning materials used in the coating operation are applied within the capture system; coating solvent flash-off, curing, and drying occurs within the capture system; and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to

measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of the production, which includes surface preparation activities and drying and curing time.

(c) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of this section to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating, thinner and/or other additive, and cleaning material used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term VOC in the methods.

(3) Use Equation 1 of this section to calculate the total mass of TVH liquid input from all the coatings, thinners and/or other additives, and cleaning materials used in the coating operation during each capture efficiency test run:

$$TVH_{used} = \sum_{i=1}^{n} (TVH_i)(Vol_i)(D_i) \qquad (Eq.\ 1)$$

Where:

$TVH_{used}$= Mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.

$TVH_i$= Mass fraction of TVH in coating, thinner and/or other additive, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

$Vol_i$= Total volume of coating, thinner and/or other additive, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

$D_i$= Density of coating, thinner and/or other additive, or cleaning material, i, kg material per liter material.

n = Number of different coatings, thinners and/or other additives, and cleaning materials used in the coating operation during the capture efficiency test run.

(4) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system. They are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(5) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of this section:

$$CE = \frac{\left(TVH_{used} - TVH_{uncaptured}\right)}{TVH_{used}} \times 100 \qquad \text{(Eq. 2)}$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{used}$= Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

$TVH_{uncaptured}$= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(6) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) The sampling points for the Method 204B or 204C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct and the total emissions entering the add-on control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR part 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(4) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of this section:

$$CE = \frac{TVH_{captured}}{\left(TVH_{captured} + \mathrm{TVH}_{\mathrm{uncaptured}}\right)} \times 100 \qquad \text{(Eq. 3)}$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{captured}$= Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

$TVH_{uncaptured}$= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(5) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section and subject to the approval of the Administrator, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

**§ 63.3966 How do I determine the add-on control device emission destruction or removal efficiency?**

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.3960. You must conduct three test runs as specified in §63.7(e)(3) and each test run must last at least 1 hour. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight.

(4) Use Method 4 of appendix A to 40 CFR part 60, to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A of appendix A to 40 CFR part 60.

(1) Use Method 25 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

(2) Use Method 25A if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A if the add-on control device is not an oxidizer.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet to the atmosphere of each device. For example, if one add-on control device is a concentrator with an outlet to the atmosphere for the high-volume dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet to the atmosphere for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions:

$$M_f = Q_{sd} C_c (12)\ (0.0416)\ \left(10^{-6}\right) \qquad (Eq.\ 1)$$

Where:

$M_f$= Total gaseous organic emissions mass flow rate, kg per hour (h).

$C_c$= Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, parts per million by volume (ppmv), dry basis.

$Q_{sd}$= Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/$m^3$ ) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \qquad (\text{Eq. } 2)$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

$M_{fi}$= Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

$M_{fo}$= Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

**§ 63.3967 How do I establish the emission capture system and add-on control device operating limits during the performance test?**

During the performance test required by §63.3960 and described in §§63.3964, 63.3965, and 63.3966, you must establish the operating limits required by §63.3892 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.3892.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(3) You must monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity ( *i.e.,* conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) Monthly external inspection of the catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst then you must conduct a new performance test to determine destruction efficiency according to §63.3966. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

(c) *Regenerative carbon adsorbers.* If your add-on control device is a regenerative carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas ( *e.g.,* steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your regenerative carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(d) *Condensers.* If your add-on control device is a condenser, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators.* If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (e)(1) through (4) of this section.

(1) During the performance test, you must monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

(3) During the performance test, you must monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(4) Use the data collected during the performance test to calculate and record the average pressure drop. This is the minimum operating limit for the dilute stream across the concentrator.

(f) *Emission capture systems.* For each capture device that is not part of a PTE that meets the criteria of §63.3965(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(1) During the capture efficiency determination required by §63.3960 and described in §§63.3964 and 63.3965, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

**§ 63.3968 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?**

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS 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 is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You must meet the requirements of paragraphs (b)(1) and (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) You must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (v) of this section.

(i) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

(ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

(iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

(v) *Flow direction indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow direction indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. Each time the flow direction changes, the next reading of the time of occurrence and flow direction must be recorded. The flow direction

indicator must be installed in each bypass line or air makeup supply line that could divert the emissions away from the add-on control device to the atmosphere.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in §63.3920.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install gas temperature monitors upstream and/or downstream of the catalyst bed as required in §63.3967(b).

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (v) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.

(iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

(iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.

(v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

(d) *Regenerative carbon adsorbers.* If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas ( *e.g.,* steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) through (3) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(3) For all regenerative carbon adsorbers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(e) *Condensers.* If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The temperature monitor must provide a gas temperature record at least once every 15 minutes.

(2) For all condensers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(f) *Concentrators.* If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (g)(2) of this section.

(g) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of this section. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (g)(1)(i) through (vii) of this section.

(i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

(ii) Use a flow sensor with an accuracy of at least 10 percent of the flow.

(iii) Perform an initial sensor calibration in accordance with the manufacturer's requirements.

(iv) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.

(v) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.

(vi) Perform leak checks monthly.

(vii) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (g)(2)(i) through (vii) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.

(ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.

(iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.

(iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.

(vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

**Other Requirements and Information**

**§ 63.3980 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the 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 requirements in §63.3881 through 3883 and §63.3890 through 3893.

(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.

**§ 63.3981 What definitions apply to this subpart?**

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, and in this section as follows:

*Additive* means a material that is added to a coating after purchase from a supplier ( *e.g.,* catalysts, activators, accelerators).

*Add-on control* means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

*Adhesive, adhesive coating* means any chemical substance that is applied for the purpose of bonding two surfaces together. 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.

*Assembled on-road vehicle coating* means any coating operation in which coating is applied to the surface of some component or surface of a fully assembled motor vehicle or trailer intended for on-road use including, but not limited to, components or surfaces on automobiles and light-duty trucks that have been repaired after a collision or otherwise repainted, fleet delivery trucks, and motor homes and other recreational vehicles (including camping trailers and fifth wheels). Assembled on-road vehicle coating includes the concurrent coating of parts of the assembled on-road vehicle that are painted off-vehicle to protect systems, equipment, or to allow full coverage. Assembled on-road vehicle coating does not include surface coating operations that meet the applicability criteria of the automobiles and light-duty trucks NESHAP. Assembled on-road vehicle coating also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles.

*Capture device* means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

*Capture efficiency or capture system efficiency* means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.

*Capture system* means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

*Cleaning material* means a solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried or wet coating ( *e.g.,* depainting or paint stripping), from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

*Coating* means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered coatings for the purposes of this subpart. A liquid plastic coating means a coating made from fine particle-size polyvinyl chloride (PVC) in solution (also referred to as a plastisol).

*Coating operation* means equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a given quantity of coating or cleaning material is applied to a given part and all subsequent points in the affected source where organic HAP are emitted from the specific quantity of coating or cleaning material on the specific part. There may be multiple coating operations in an affected source. Coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

*Coatings solids* means the nonvolatile portion of the coating that makes up the dry film.

*Continuous parameter monitoring system (CPMS)* means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of coating operation, or capture system, or add-on control device parameters.

*Controlled coating operation* means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

*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 limit or operating limit or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Emission limitation* means the aggregate of all requirements associated with a compliance option including emission limit, operating limit, work practice standard, etc.

*Enclosure* means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

*Exempt compound* means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

*Extreme performance fluoropolymer coating* means coatings that are formulated systems based on fluoropolymer resins which often contain bonding matrix polymers dissolved in non-aqueous solvents as well as other ingredients. Extreme performance fluoropolymer coatings are typically used when one or more critical performance criteria are required including, but not limited to a nonstick low-energy surface, dry film lubrication, high resistance to chemical attack, extremely wide operating temperature, high electrical insulating properties, or that the surface comply with government ( *e.g.,* USDA, FDA) or third party specifications for health, safety, reliability, or performance. Once applied to a substrate, extreme performance fluoropolymer coatings undergo a curing process that typically requires high temperatures, a chemical reaction, or other specialized technology.

*Facility maintenance* means the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.

*General use coating* means any material that meets the definition of coating but does not meet the definition of high performance coating, rubber-to-metal coating, magnet wire coating, or extreme performance fluoropolymer coating as defined in this section.

*High performance architectural coating* means any coating applied to architectural subsections which is required to meet the specifications of Architectural Aluminum Manufacturer's Association's publication number AAMA 605.2–2000.

*High performance coating* means any coating that meets the definition of high performance architectural coating or high temperature coating in this section.

*High temperature coating* means any coating applied to a substrate which during normal use must withstand temperatures of at least 538 degrees Celsius (1000 degrees Fahrenheit).

*Hobby shop* means any surface coating operation, located at an affected source, that is used exclusively for personal, noncommercial purposes by the affected source's employees or assigned personnel.

*Magnet wire coatings,* commonly referred to as magnet wire enamels, are applied to a continuous strand of wire which will be used to make turns (windings) in electrical devices such as coils, transformers, or motors. Magnet wire coatings provide high dielectric strength and turn-to-turn conductor insulation. This allows the turns of an electrical device to be placed in close proximity to one another which leads to increased coil effectiveness and electrical efficiency.

*Magnet wire coating machine* means equipment which applies and cures magnet wire coatings.

*Manufacturer's formulation data* means data on a material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in §63.3941. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

*Mass fraction of organic HAP* means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

*Month* means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

*Non-HAP coating* means, for the purposes of this subpart, a coating that contains no more than 0.1 percent by mass of any individual organic HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and no more than 1.0 percent by mass for any other individual HAP.

*Organic HAP content* means the mass of organic HAP emitted per volume of coating solids used for a coating calculated using Equation 2 of §63.3941. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, organic HAP content is the mass of organic HAP that is emitted, rather than the organic HAP content of the coating as it is received.

*Permanent total enclosure (PTE)* means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

*Personal watercraft* means a vessel (boat) which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person or persons sitting, standing, or kneeling on the vessel, rather than in the conventional manner of sitting or standing inside the vessel.

*Protective oil* means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils. Protective oils used on miscellaneous metal parts and products include magnet wire lubricants and soft temporary protective coatings that are removed prior to installation or further assembly of a part or component.

*Reactive adhesive* means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70 percent of the liquid components of the system, excluding water, react during the process.

*Research or laboratory facility* means a facility whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a *de minimis* manner.

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

*Rubber-to-metal coatings* are coatings that contain heat-activated polymer systems in either solvent or water that, when applied to metal substrates, dry to a non-tacky surface and react chemically with the rubber and metal during a vulcanization process.

*Startup, initial* means the first time equipment is brought online in a facility.

*Surface preparation* means use of a cleaning material on a portion of or all of a substrate. This includes use of a cleaning material to remove dried coating, which is sometimes called depainting.

*Temporary total enclosure* 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 appendix M, 40 CFR part 51.

*Thinner* means an organic solvent that is added to a coating after the coating is received from the supplier.

*Total volatile hydrocarbon (TVH)* means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

*Uncontrolled coating operation* means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

*Volatile organic compound (VOC)* means any compound defined as VOC in 40 CFR 51.100(s).

*Volume fraction of coating solids* means the ratio of the volume of coating solids (also known as the volume of nonvolatiles) to the volume of a coating in which it is contained; liters (gal) of coating solids per liter (gal) of coating.

*Wastewater* means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

**Table 1 to Subpart MMMM of Part 63—Operating Limits if Using the Emission Rate With Add-On Controls Option**

If you are required to comply with operating limits by §63.3892(c), you must comply with the applicable operating limits in the following table:

| For the following device . . . | You must meet the following operating limit . . . | And you must demonstrate continuous compliance with the operating limit by . . . |
|---|---|---|
| 1. Thermal oxidizer | a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.3967(a) | i. Collecting the combustion temperature data according to §63.3968(c);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit. |
| 2. Catalytic oxidizer | a. The average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to §63.3967(b) (for magnet wire coating machines, temperature can be monitored before or after the catalyst bed); and either | i. Collecting the temperature data according to §63.3968(c);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average temperature before (or for magnet wire coating machines after) the catalyst bed at or above the temperature limit. |
| | b. Ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to §63.3967(b) (2); or | i. Collecting the temperature data according to §63.3968(c);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average temperature difference at or above the temperature difference limit. |
| | c. Develop and implement an inspection and maintenance plan according to §63.3967(b)(4) or for magnet wire coating machines according to section 3.0 of appendix A to this subpart | i. Maintaining and up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by §63.3967(b)(4) or for magnet wire coating machines by section 3.0 of appendix A to this subpart, you must take corrective action as soon as practicable consistent with the manufacturer's recommendations. |
| 3. Regenerative carbon adsorber | a. The total regeneration desorbing gas ( *e.g.,* steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to §63.3967(c); and | i. Measuring the total regeneration desorbing gas ( *e.g.,* steam or nitrogen) mass flow for each regeneration cycle according to §63.3968(d); and<br>ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit. |
| | b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to §63.3967(c) | i. Measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to §63.3968(d); and<br>ii. Operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit. |
| 4. Condenser | a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to §63.3967(d) | i. Collecting the condenser outlet (product side) gas temperature according to §63.3968(e);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit. |

| For the following device . . . | You must meet the following operating limit . . . | And you must demonstrate continuous compliance with the operating limit by . . . |
|---|---|---|
| 5. Concentrators, including zeolite wheels and rotary carbon adsorbers | a. The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to §63.3967(e); and | i. Collecting the temperature data according to 63.3968(f);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average temperature at or above the temperature limit. |
| | b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to §63.3967(e) | i. Collecting the pressure drop data according to 63.3968(f);<br>ii. Reducing the pressure drop data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average pressure drop at or above the pressure drop limit. |
| 6. Emission capture system that is a PTE according to §63.3965(a) | a. The direction of the air flow at all times must be into the enclosure; and either | i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to §63.3968(b)(1) or the pressure drop across the enclosure according to §63.3968(g)(2); and<br>ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times. |
| | b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minutes; or | i. See items 6.a.i and 6.a.ii. |
| | c. The pressure drop across the enclosure must be at least 0.007 inch $H_2O$, as established in Method 204 of appendix M to 40 CFR part 51 | i. See items 6.a.i and 6.a.ii. |
| 7. Emission capture system that is not a PTE according to §63.3965(a) | a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to §63.3967(f) | i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.3968(g);<br>ii. Reducing the data to 3-hour block averages; and<br>iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limited. |

**Table 2 to Subpart MMMM of Part 63—Applicability of General Provisions to Subpart MMMM of Part 63**

You must comply with the applicable General Provisions requirements according to the following table:

| Citation | Subject | Applicable to subpart MMMM | Explanation |
|---|---|---|---|
| §63.1(a)(1)–(14) | General Applicability | Yes | |
| §63.1(b)(1)–(3) | Initial Applicability Determination | Yes | Applicability to subpart MMMM is also specified in §63.3881. |
| §63.1(c)(1) | Applicability After Standard Established | Yes | |

| Citation | Subject | Applicable to subpart MMMM | Explanation |
|---|---|---|---|
| §63.1(c)(2)–(3) | Applicability of Permit Program for Area Sources | No | Area sources are not subject to subpart MMMM. |
| §63.1(c)(4)–(5) | Extensions and Notifications | Yes | |
| §63.1(e) | Applicability of Permit Program Before Relevant Standard is Set | Yes | |
| §63.2 | Definitions | Yes | Additional definitions are specified in §63.3981. |
| §63.1(a)–(c) | Units and Abbreviations | Yes | |
| §63.4(a)(1)–(5) | Prohibited Activities | Yes | |
| §63.4(b)–(c) | Circumvention/Severability | Yes | |
| §63.5(a) | Construction/Reconstruction | Yes | |
| §63.5(b)(1)–(6) | Requirements for Existing Newly Constructed, and Reconstructed Sources | Yes | |
| §63.5(d) | Application for Approval of Construction/Reconstruction | Yes | |
| §63.5(e) | Approval of Construction/Reconstruction | Yes | |
| §63.5(f) | Approval of Construction/Reconstruction Based on Prior State Review | Yes | |
| §63.6(a) | Compliance With Standards and Maintenance Requirements—Applicability | Yes | |
| §63.6(b)(1)–(7) | Compliance Dates for New and Reconstructed Sources | Yes | Section 63.3883 specifies the compliance dates. |
| §63.6(c)(1)–(5) | Compliance Dates for Existing Sources | Yes | Section 63.3883 specifies the compliance dates. |
| §63.6(e)(1)–(2) | Operation and Maintenance | Yes | |
| §63.6(e)(3) | Startup, Shutdown, and Malfunction Plan | Yes | Only sources using an add-on control device to comply with the standard must complete startup, shutdown, and malfunction plans. |
| §63.6(f)(1) | Compliance Except During Startup, Shutdown, and Malfunction | Yes | Applies only to sources using an add-on control device to comply with the standard. |
| §63.6(f)(2)–(3) | Methods for Determining Compliance. | Yes | |
| §63.6(g)(1)–(3) | Use of an Alternative Standard | Yes | |
| §63.6(h) | Compliance With Opacity/Visible Emission Standards | No | Subpart MMMM does not establish opacity standards and does not require continuous opacity monitoring systems (COMS). |

| Citation | Subject | Applicable to subpart MMMM | Explanation |
|---|---|---|---|
| §63.6(i)(1)–(16) | Extension of Compliance | Yes | |
| §63.6(j) | Presidential Compliance Exemption | Yes | |
| §63.7(a)(1) | Performance Test Requirements—Applicability | Yes | Applies to all affected sources. Additional requirements for performance testing are specified in §§63.3964, 63.3965, and 63.3966. |
| §63.7(a)(2) | Performance Test Requirements—Dates | Yes | Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standard. Section 63.3960 specifies the schedule for performance test requirements that are earlier than those specified in §63.7(a)(2). |
| §63.7(a)(3) | Performance Tests Required By the Administrator | Yes | |
| §63.7(b)–(e) | Performance Test Requirements—Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test | Yes | Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard. |
| §63.7(f) | Performance Test Requirements—Use of Alternative Test Method | Yes | Applies to all test methods except those used to determine capture system efficiency. |
| §63.7(g)–(h) | Performance Test Requirements—Data Analysis, Recordkeeping, Reporting, Waiver of Test | Yes | Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard. |
| §63.8(a)(1)–(3) | Monitoring Requirements—Applicability | Yes | Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for monitoring are specified in §63.3968. |
| §63.8(a)(4) | Additional Monitoring Requirements | No | Subpart MMMM does not have monitoring requirements for flares. |
| §63.8(b) | Conduct of Monitoring | Yes | |
| §63.8(c)(1)–(3) | Continuous Monitoring Systems (CMS) Operation and Maintenance | Yes | Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for CMS operations and maintenance are specified in §63.3968. |
| §63.8(c)(4) | CMS | No | §63.3968 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply. |
| §63.8(c)(5) | COMS | No | Subpart MMMM does not have opacity or visible emission standards. |

| Citation | Subject | Applicable to subpart MMMM | Explanation |
|---|---|---|---|
| §63.8(c)(6) | CMS Requirements | No | Section 63.3968 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply. |
| §63.8(c)(7) | CMS Out-of-Control Periods | Yes | |
| §63.8(c)(8) | CMS Out-of-Control Periods and Reporting | No | §63.3920 requires reporting of CMS out-of-control periods. |
| §63.8(d)–(e) | Quality Control Program and CMS Performance Evaluation | No | Subpart MMMM does not require the use of continuous emissions monitoring systems. |
| §63.8(f)(1)–(5) | Use of an Alternative Monitoring Method | Yes | |
| §63.8(f)(6) | Alternative to Relative Accuracy Test | No | Subpart MMMM does not require the use of continuous emissions monitoring systems. |
| §63.8(g)(1)–(5) | Data Reduction | No | Sections 63.3967 and 63.3968 specify monitoring data reduction. |
| §63.9(a)–(d) | Notification Requirements | Yes | |
| §63.9(e) | Notification of Performance Test | Yes | Applies only to capture system and add-on control device performance tests at sources using these to comply with the standard. |
| §63.9(f) | Notification of Visible Emissions/Opacity Test | No | Subpart MMMM does not have opacity or visible emissions standards. |
| §63.9(g)(1)–(3) | Additional Notifications When Using CMS | No | Subpart MMMM does not require the use of continuous emissions monitoring systems. |
| §63.9(h) | Notification of Compliance Status | Yes | Section 63.3910 specifies the dates for submitting the notification of compliance status. |
| §63.9(i) | Adjustment of Submittal Deadlines | Yes | |
| §63.9(j) | Change in Previous Information | Yes | |
| §63.10(a) | Recordkeeping/Reporting—Applicability and General Information | Yes | |
| §63.10(b)(1) | General Recordkeeping Requirements | Yes | Additional requirements are specified in §§63.3930 and 63.3931. |
| §63.10(b)(2)(i)–(v) | Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS | Yes | Requirements for startup, shutdown, and malfunction records only apply to add-on control devices used to comply with the standard. |
| §63.10(b)(2)(vi)–(xi) | | Yes | |
| §63.10(b)(2)(xii) | Records | Yes | |
| §63.10(b)(2)(xiii) | | No | Subpart MMMM does not require the use of continuous emissions monitoring systems. |

| Citation | Subject | Applicable to subpart MMMM | Explanation |
|---|---|---|---|
| §63.10(b)(2)(xiv) | | Yes | |
| §63.10(b)(3) | Recordkeeping Requirements for Applicability Determinations | Yes | |
| §63.10(c)(1)–(6) | Additional Recordkeeping Requirements for Sources with CMS | Yes | |
| §63.10(c)(7)–(8) | | No | The same records are required in §63.3920(a)(7). |
| §63.10(c)(9)–(15) | | Yes | |
| §63.10(d)(1) | General Reporting Requirements | Yes | Additional requirements are specified in §63.3920. |
| §63.10(d)(2) | Report of Performance Test Results | Yes | Additional requirements are specified in §63.3920(b). |
| §63.10(d)(3) | Reporting Opacity or Visible Emissions Observations | No | Subpart MMMM does not require opacity or visible emissions observations. |
| §63.10(d)(4) | Progress Reports for Sources With Compliance Extensions | Yes | |
| §63.10(d)(5) | Startup, Shutdown, and Malfunction Reports | Yes | Applies only to add-on control devices at sources using these to comply with the standard. |
| §63.10(e)(1)–(2) | Additional CMS Reports | No | Subpart MMMM does not require the use of continuous emissions monitoring systems. |
| §63.10(e) (3) | Excess Emissions/CMS Performance Reports | No | Section 63.3920 (b) specifies the contents of periodic compliance reports. |
| §63.10(e) (4) | COMS Data Reports | No | Subpart MMMMM does not specify requirements for opacity or COMS. |
| §63.10(f) | Recordkeeping/Reporting Waiver | Yes | |
| §63.11 | Control Device Requirements/Flares | No | Subpart MMMM does not specify use of flares for compliance. |
| §63.12 | State Authority and Delegations | Yes | |
| §63.13 | Addresses | Yes | |
| §63.14 | Incorporation by Reference | Yes | |
| §63.15 | Availability of Information/Confidentiality | Yes | |

**Table 3 to Subpart MMMM of Part 63—Default Organic HAP Mass Fraction for Solvents and Solvent Blends**

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching

either the solvent blend name or CAS number, or use the organic HAP mass fraction from table 4 to this subpart if neither the name or CAS number match.

| Solvent/solvent blend | CAS. No. | Average organic HAP mass fraction | Typical organic HAP, percent by mass |
|---|---|---|---|
| 1. Toluene | 108–88–3 | 1.0 | Toluene. |
| 2. Xylene(s) | 1330–20–7 | 1.0 | Xylenes, ethylbenzene. |
| 3. Hexane | 110–54–3 | 0.5 | n-hexane. |
| 4. n-Hexane | 110–54–3 | 1.0 | n-hexane. |
| 5. Ethylbenzene | 100–41–4 | 1.0 | Ethylbenzene. |
| 6. Aliphatic 140 | | 0 | None. |
| 7. Aromatic 100 | | 0.02 | 1% xylene, 1% cumene. |
| 8. Aromatic 150 | | 0.09 | Naphthalene. |
| 9. Aromatic naphtha | 64742–95–6 | 0.02 | 1% xylene, 1% cumene. |
| 10. Aromatic solvent | 64742–94–5 | 0.1 | Naphthalene. |
| 11. Exempt mineral spirits | 8032–32–4 | 0 | None. |
| 12. Ligroines (VM & P) | 8032–32–4 | 0 | None. |
| 13. Lactol spirits | 64742–89–6 | 0.15 | Toluene. |
| 14. Low aromatic white spirit | 64742–82–1 | 0 | None. |
| 15. Mineral spirits | 64742–88–7 | 0.01 | Xylenes. |
| 16. Hydrotreated naphtha | 64742–48–9 | 0 | None. |
| 17. Hydrotreated light distillate | 64742–47–8 | 0.001 | Toluene. |
| 18. Stoddard solvent | 8052–41–3 | 0.01 | Xylenes. |
| 19. Super high-flash naphtha | 64742–95–6 | 0.05 | Xylenes. |
| 20. Varsol®solvent | 8052–49–3 | 0.01 | 0.5% xylenes, 0.5% ethylbenzene. |
| 21. VM & P naphtha | 64742–89–8 | 0.06 | 3% toluene, 3% xylene. |
| 22. Petroleum distillate mixture | 68477–31–6 | 0.08 | 4% naphthalene, 4% biphenyl. |

**Table 4 to Subpart MMMM of Part 63—Default Organic HAP Mass Fraction for Petroleum Solvent Groupsa**

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

| Solvent type | Average organic HAP mass fraction | Typical organic HAP, percent by mass |
|---|---|---|
| Aliphatic[b] | 0.03 | 1% Xylene, 1% Toluene, and 1% Ethylbenzene. |
| Aromatic[c] | 0.06 | 4% Xylene, 1% Toluene, and 1% Ethylbenzene. |

[a]Use this table only if the solvent blend does not match any of the solvent blends in Table 3 to this subpart by either solvent blend name or CAS number and you only know whether the blend is aliphatic or aromatic.

[b]Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

[c]Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

**Appendix A to Subpart MMMM of Part 63—Alternative Capture Efficiency and Destruction Efficiency Measurement and Monitoring Procedures for Magnet Wire Coating Operations**

1.0 Introduction.

1.1 These alternative procedures for capture efficiency and destruction efficiency measurement and monitoring are intended principally for newer magnet wire coating machines where the control device is internal and integral to the oven so that it is difficult or infeasible to make gas measurements at the inlet to the control device.

1.2 In newer gas fired magnet wire ovens with thermal control (no catalyst), the burner tube serves as the control device (thermal oxidizer) for the process. The combustion of solvents in the burner tube is the principal source of heat for the oven.

1.3 In newer magnet wire ovens with a catalyst there is either a burner tube (gas fired ovens) or a tube filled with electric heating elements (electric heated oven) before the catalyst. A large portion of the solvent is often oxidized before reaching the catalyst. The combustion of solvents in the tube and across the catalyst is the principal source of heat for the oven. The internal catalyst in these ovens cannot be accessed without disassembly of the oven. This disassembly includes removal of the oven insulation. Oven reassembly often requires the installation of new oven insulation.

1.4 Some older magnet wire ovens have external afterburners. A significant portion of the solvent is oxidized within these ovens as well.

1.5 The alternative procedure for destruction efficiency determines the organic carbon content of the volatiles entering the control device based on the quantity of coating used, the carbon content of the volatile portion of the coating and the efficiency of the capture system. The organic carbon content of the control device outlet (oven exhaust for ovens without an external afterburner) is determined using Method 25 or 25A.

1.6 When it is difficult or infeasible to make gas measurements at the inlet to the control device, measuring capture efficiency with a gas-to-gas protocol (see §63.3965(d)) which relies on direct measurement of the captured gas stream will also be difficult or infeasible. In these situations, capture efficiency measurement is more appropriately done with a procedure which does not rely on direct measurement of the captured gas stream.

1.7 Magnet wire ovens are relatively small compared to many other coating ovens. The exhaust rate from an oven is low and varies as the coating use rate and solvent loading rate change from job to job. The air balance in magnet wire ovens is critical to product quality. Magnet wire ovens must be operated under negative pressure to avoid smoke and odor in the workplace, and the exhaust rate must be sufficient to prevent over heating within the oven.

1.8 The liquid and gas measurements needed to determine capture efficiency and control device efficiency using these alternative procedures may be made simultaneously.

1.9 Magnet wire facilities may have many ( *e.g.,* 20 to 70 or more) individual coating lines each with its own capture and control system. With approval, representative capture efficiency and control device efficiency testing of one magnet wire coating machine out of a group of identical or very similar magnet wire coating machines may be performed rather than testing every individual magnet wire coating machine. The operating parameters must be established for each tested magnet wire coating machine during each capture efficiency test and each control device efficiency test. The operating parameters established for each tested magnet wire coating machine also serve as the operating parameters for untested or very similar magnet wire coating machines represented by a tested magnet wire coating machine.

2.0 Capture Efficiency.

2.1 If the capture system is a permanent total enclosure as described in §63.3965(a), then its capture efficiency may be assumed to be 100 percent.

2.2 If the capture system is not a permanent total enclosure, then capture efficiency must be determined using the liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure in §63.3965(c), or an alternative capture efficiency protocol (see §63.3965(e)) which does not rely on direct measurement of the captured gas stream.

2.3 As an alternative to establishing and monitoring the capture efficiency operating parameters in §63.3967(f), the monitoring described in either section 2.4 or 2.5, and the monitoring described in sections 2.6 and 2.7 may be used for magnet wire coating machines.

2.4 Each magnet wire oven must be equipped with an interlock mechanism which will stop or prohibit the application of coating either when any exhaust fan for that oven is not operating or when the oven experiences an over limit temperature condition.

2.5 Each magnet wire oven must be equipped with an alarm which will be activated either when any oven exhaust fan is not operating or when the oven experiences an over limit temperature condition.

2.6 If the interlock in 2.4 or the alarm in 2.5 is monitoring for over limit temperature conditions, then the temperature(s) that will trigger the interlock or the alarm must be included in the start-up, shutdown and malfunction plan and the interlock or alarm must be set to be activated when the oven reaches that temperature.

2.7 Once every 6 months, each magnet wire oven must be checked using a smoke stick or equivalent approach to confirm that the oven is operating at negative pressure compared to the surrounding atmosphere.

3.0 Control Device Efficiency.

3.1 Determine the weight fraction carbon content of the volatile portion of each coating, thinner, additive, or cleaning material used during each test run using either the procedure in section 3.2 or 3.3.

3.2 Following the procedures in Method 204F, distill a sample of each coating, thinner, additive, or cleaning material used during each test run to separate the volatile portion. Determine the weight fraction carbon content of each distillate using ASTM Method D5291–02, “Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants” (incorporated by reference, see §63.14).

3.3 Analyze each coating, thinner, additive or cleaning material used during each test run using Method 311. For each volatile compound detected in the gas chromatographic analysis of each coating, thinner, additive, or cleaning material calculate the weight fraction of that whole compound in the coating, thinner, additive, or cleaning material. For each volatile compound detected in the gas chromatographic analysis of each coating, thinner, additive, or cleaning material calculate the weight fraction of the carbon in that compound in the coating, thinner, additive, or cleaning material. Calculate the weight fraction carbon content of each coating, thinner, additive, or cleaning material as the ratio of the sum of the carbon weight fractions divided by the sum of the whole compound weight fractions.

3.4 Determine the mass fraction of total volatile hydrocarbon ($TVH_i$) in each coating, thinner, additive, or cleaning material, i, used during each test run using Method 24. The mass fraction of total volatile hydrocarbon equals the weight fraction volatile matter ($W_v$in Method 24) minus the weight fraction water ($W_w$in Method 24), if any, present in the coating. The ASTM Method D6053–00, "Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes" (incorporated by reference, see §63.14), may be used as an alternative to Method 24 for magnet wire enamels. The specimen size for testing magnet wire enamels with ASTM Method D6053–00 must be 2.0 ±0.1 grams.

3.5 Determine the volume ($VOL_i$) or mass ($MASS_i$) of each coating, thinner, additive, or cleaning material, i, used during each test run.

3.6 Calculate the total volatile hydrocarbon input ($TVHC_{inlet}$) to the control device during each test run, as carbon, using Equation 1:

$$TVHC_{inlet} = \sum_{i=1}^{n} (TVH_i \times VOL_i \times D_i \times CD_i) \qquad (Eq.\ 1)$$

where:

$TVH_i$= Mass fraction of TVH in coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run.

$VOL_i$= Volume of coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, liters.

$D_i$= Density of coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, kg per liter.

$CD_i$= Weight fraction carbon content of the distillate from coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, percent.

n = Number of coating, thinner, additive, and cleaning materials used in the coating operation during the test run.

3.7 If the mass, $MASS_i$, of each coating, solvent, additive, or cleaning material, i, used during the test run is measured directly then $MASS_i$can be substituted for $VOL_i \times D_i$in Equation 1 in section 3.6.

3.8 Determine the TVHC output ($TVHC_{outlet}$) from the control device, as carbon, during each test run using the methods in §63.3966(a) and the procedure for determining $M_{fo}$in §63.3966(d). $TVHC_{outlet}$equals $M_{fo}$times the length of the test run in hours.

3.9 Determine the control device efficiency (DRE) for each test run using Equation 2:

$$DRE = \frac{(TVHC_{inlet} - TVHC_{outlet})}{TVHC_{inlet}} \times 100 \qquad (\text{Eq. } 2)$$

3.10 The efficiency of the control device is the average of the three individual test run values determined in section 3.9.

3.11 As an alternative to establishing and monitoring the destruction efficiency operating parameters for catalytic oxidizers in §63.3967(b), the monitoring described in sections 3.12 and 3.13 may be used for magnet wire coating machines equipped with catalytic oxidizers.

3.12 During the performance test, you must monitor and record the temperature either just before or just after the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature either just before or just after the catalyst bed during

the performance test. This is the minimum operating limit for your catalytic oxidizer and for the catalytic oxidizers in identical or very similar magnet wire coating machines represented by the tested magnet wire coating machine.

3.13 You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s). The plan must address, at a minimum, the elements specified in sections 3.14 and 3.15, and the elements specified in either (a) section 3.16 or (b) sections 3.17 and 3.18.

3.14 You must conduct a monthly external inspection of each catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

3.15 You must conduct an annual internal inspection of each accessible catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must replace the catalyst bed or take corrective action consistent with the manufacturer's recommendations. This provision does not apply to internal catalysts which cannot be accessed without disassembling the magnet wire oven.

3.16 You must take a sample of each catalyst bed and perform an analysis of the catalyst activity ( *i.e.,* conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. This sampling and analysis must be done within the time period shown in Table 1 below of the most recent of the last catalyst activity test or the last catalyst replacement. For example, if the warranty for the catalyst is 3 years and the catalyst was more recently replaced then the sampling and analysis must be done within the earlier of 26,280 operating hours or 5 calendar years of the last catalyst replacement. If the warranty for the catalyst is 3 years and the catalyst was more recently tested then the sampling and analysis must be done within the earlier of 13,140 operating hours or 3 calendar years of the last catalyst activity test. If problems are found during the catalyst activity test, you must replace the catalyst bed or take corrective action consistent with the manufacturer's recommendations.

**Table 1—Catalyst Monitoring Requirements**

| If the catalyst was last (more recently) replaced and the warranty period is . . . | Then the time between catalyst replacement and the next catalyst activity test cannot exceed the earlier of . . . | And the catalyst was more recently tested, then the time between catalyst activity tests cannot exceed the earlier of . . . |
|---|---|---|
| 1 year | 8,760 operating hours or 5 calendar years | 8,760 operating hours or 3 calendar years. |
| 2 years | 15,520 operating hours or 5 calendar years | 8,760 operating hours or 3 calendar years. |
| 3 years | 26,280 operating hours or 5 calendar years | 13,100 operating hours or 3 calendar years. |
| 4 years | 35,040 operating hours or 5 calendar years | 17,520 operating hours or 3 calendar years. |
| 5 or more years | 43,800 operating hours or 5 calendar years | 21,900 operating hours or 3 calendar years. |

3.17 During the performance test, you must determine the average concentration of organic compounds as carbon in the magnet wire oven exhaust stack gases ($C_c$in Equation 1 in §63.3966(d)) and the destruction efficiency of the catalytic oxidizer, and calculate the operating limit for oven exhaust stack gas concentration as follows. You must identify the highest organic HAP content coating used on this magnet wire coating machine or any identical or very similar magnet wire coating machines to which the same destruction efficiency test results will be applied. Calculate the percent emission reduction necessary to meet the magnet wire coating emission limit when using this coating. Calculate the average concentration of organic compounds as carbon in the magnet wire oven exhaust stack gases that would be equivalent to exactly meeting the magnet wire coating emissions limit when using the highest organic HAP content coating. The maximum operating limit for oven exhaust stack gas concentration equals 90 percent of this calculated concentration.

3.18 For each magnet wire coating machine equipped with a catalytic oxidizer you must perform an annual 10 minute test of the oven exhaust stack gases using EPA Method 25A. This test must be performed under steady state operating conditions similar to those at which the last destruction efficiency test for equipment of that type (either the specific magnet wire coating machine or an identical or very similar magnet wire coating machine) was conducted. If the average exhaust stack gas concentration during the annual test of a magnet wire coating machine equipped with a catalytic oxidizer is greater than the operating limit established in section 3.17 then that is a deviation from the operating limit for that catalytic oxidizer. If problems are found during the annual 10-minute test of the oven exhaust

stack gases, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

3.19 If a catalyst bed is replaced and the replacement catalyst is not of like or better kind and quality as the old catalyst, then you must conduct a new performance test to determine destruction efficiency according to §63.3966 and establish new operating limits for that catalytic oxidizer unless destruction efficiency test results and operating limits for an identical or very similar unit (including consideration of the replacement catalyst) are available and approved for use for the catalytic oxidizer with the replacement catalyst.

3.20 If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

This document was downloaded from the following source on September 5, 2008:

**Subpart MMMM--NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SURFACE COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS**

# Indiana Department of Environmental Management
Office of Air Quality

## Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

### Source Background and Description

| | |
|---|---|
| **Source Name:** | Forest River, Inc. Coachmen Division |
| **Source Location:** | 423 N. Main Street, Middlebury, Indiana 46540 |
| **County:** | Elkhart |
| **SIC Code:** | 3792 |
| **Permit Renewal No.:** | T039-30817-00062 |
| **Permit Reviewer:** | Teresa Freeman |

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Forest River, Inc. Coachmen Division relating to the operation of a stationary travel trailer, camper, para-transit vehicle, and motor home manufacturing source. On August 2, 2011, Forest River, Inc. Coachmen Division submitted an application to the OAQ requesting to renew its operating permit. Forest River, Inc. Coachmen Division was issued its first Part 70 Operating Permit Renewal T039-17984-00062 on July 10, 2007.

### Permitted Emission Units and Pollution Control Equipment

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

(a) One (1) frame spray coating area (Plant 105) used to coat metal, identified as EU12, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame spray coating area, is considered to be a surface coating facility at an existing affected source.

(b) Fourteen (14) thinning and reducing areas (Plants 4, 5, 7, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) used to coat metal, identified as EU14, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, all areas (all plants) exhausted through general ventilation systems. In addition, Plant 105 has two (2) painting booths equipped with air-assisted airless and HVLP spray applicators with dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) thinning and reducing areas, are considered to be surface coating facilities at an existing affected source.

(c) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of caulks and sealants used to coat plastic, wood and metal, identified as EU7, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(d) Fourteen (14) spray coating areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of undercoating metal parts, identified as EU9, installed prior to 1972, equipped with airless or HVLP spray applicators and dry filters for overspray control, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) spray coating areas, are considered to be surface coating facilities at an existing affected source.

(e) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of general construction adhesives to metal parts, identified as EU3, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310 exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(f) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of plumbing adhesives to plastic parts, identified as EU8, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(g) Fourteen (14) manual product cleaning areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310), for the manual wipe degreasing of plastic and metal product prior to application of decals, identified as EU10, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310, exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) manual product cleaning areas, are considered to be surface coating facilities at an existing affected source.

(h) One (1) frame coating paint spray booth, identified as 220-01, installed in 2003, using a black HAPs-free enamel coating in Plant 7 used to coat metal parts, equipped with HVLP applicators and dry filters for overspray control, exhausted to stack S9, capacity: 1.00 vehicle per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame coating paint spray booth, is considered to be a surface coating facility at an existing affected source.

(i) One (1) spray booth used to coat metal parts, identified as Plant 250 Touch-Up Repair Booth, installed in 2005, equipped with dry filters for overspray control, exhausted to stack S11, capacity: 0.75 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) spray booth is considered to be a surface coating facility at an existing affected source.

(j) One (1) paint shop, identified as EU1, with three (3) spray booths in Plant 220 used to coat plastic parts, approved in 2007 for construction, with a maximum capacity of 0.25 units per hour each, using dry filters to control overspray, and exhausting to stacks S12, S13, and S14. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the three (3) spray booths are considered to be surface coating facilities at an existing affected source.

**Insignificant Activities**

The source also consists of the following insignificant activities:

(a) Machining where an aqueous cutting coolant continuously floods the machining interface.

(b) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour totaling 346 units with a maximum capacity of 94.656 MMBtu/hr.

(c) Welding operation: 24 steel MIG welding stations each with a maximum wire consumption rate of 0.35 pounds per hour, 17 aluminum MIG welding machines each with maximum wire consumption rate of 0.13 pounds per hour.

(d) Eight (8) woodworking areas (Plants 4, 7, 110, 201, 205, 210, 220, and 310), identified as EU16, with particulate for each area controlled by a cyclone and baghouse, exhausted through general building ventilation and having $PM/PM_{10}$ emissions less than five (5) pounds per hour and twenty-five (25) pounds per day, total. [326 IAC 6-3-2]

## Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal T039-17984-00062 on July 10, 2007, the source has constructed or has been operating under the following additional approvals:

(a) Interim Significant Source Modification No. 039-25130I-00062 issued on September 12, 2007;

(b) Significant Source Modification No. 039-25130-00062 issued on November 15, 2007;

(c) Significant Permit Modification No. 039-25167-00062 issued on November 30, 2007;

(d) Administrative Amendment No. 039-25787-00062 issued on January 28, 2008; and

(e) Administrative Amendment No. 039-27421-00062 issued on February 20, 2009.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

## Enforcement Issue

There are no enforcement actions pending.

## Emission Calculations

See Appendix A of this document for detailed emission calculations.

## County Attainment Status

The source is located in Elkhart County.

| Pollutant | Designation |
|---|---|
| $SO_2$ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Attainment effective July 19, 2007, for the 8-hour ozone standard.[1] |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Cannot be classified or better than national standards. |
| Pb | Not designated. |

[1]Attainment 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.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides ($NO_x$) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and $NO_x$ 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 $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and $SO_2$ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Elkhart County has been classified as attainment or unclassifiable in Indiana for PM10, CO, NO2, lead and SO2. 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 | 123.11 |
| $PM_{10}$ | 123.82 |
| $PM_{2.5}$ | 123.82 |
| $SO_2$ | 0.08 |
| VOC | 1082.38 |
| CO | 10.57 |
| $NO_x$ | 12.58 |
| GHGs as $CO_2e$ | 15190 |
| Single HAP | >10 |
| Total HAP | 1037.43 |

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5 and VOC are 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 | PM | $PM_{10}$* | $PM_{2.5}$** | $SO_2$ | $NO_x$ | VOC | CO | GHGs | Total HAPs |
|---|---|---|---|---|---|---|---|---|---|
| Paint Shop EU1 | 12.16 | 12.16 | 12.16 | - | - | | - | - | 38.27 |
| Assembly Area EU3 | 0 | 0 | 0 | - | - | | - | - | 144.61 |
| Assembly Area EU7 | 0 | 0 | 0 | - | - | | - | - | 425.22 |
| Assembly Area EU8 | 0 | 0 | 0 | - | - | | - | - | - |
| Spray Coating EU9 | 41.83 | 41.83 | 41.83 | - | - | 249 | - | - | 148.38 |
| Manual product cleaning EU10 | 0 | 0 | 0 | - | - | | - | - | 70.65 |
| Frame spray coating EU12 | 55.76 | 55.76 | 55.76 | - | - | | - | - | 151.85 |
| Thinning/Reducing EU14 | 0.83 | 0.83 | 0.83 | - | - | | - | - | 38.66 |
| Frame coating 220-01 | 7.73 | 7.73 | 7.73 | - | - | | - | - | 12.02 |
| Touch up Booth 250 | 1.45 | 1.45 | 1.45 | - | - | | - | - | 7.53 |
| Combustion Units | 0.24 | 0.96 | 0.96 | 0.08 | 12.58 | 0.69 | 10.57 | 15190 | 0.24 |
| Woodworking | 2.80 | 2.80 | 2.80 | - | - | - | - | - | - |
| Welding | 0.31 | 0.31 | 0.31 | - | - | - | - | - | 0.01 |
| **Total PTE of Entire Source** | **123.11** | **123.82** | **123.82** | **0.08** | **12.58** | **249.69** | **10.57** | **15190** | **1037.42** |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | 100,000 $CO_2e$ | 25 |
| PSD Major Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 100,000 $CO_2e$ | NA |

(a) This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of $CO_2$ equivalent emissions ($CO_2e$) per year, and it is not in one of the twenty-eight (28) listed source categories.

## Federal Rule Applicability

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

| Emission Unit / Pollutant | Control Device Used | Emission Limitation (Y/N) | Uncontrolled PTE (tons/year) | Controlled PTE (tons/year) | Major Source Threshold (tons/year) | CAM Applicable (Y/N) | Large Unit (Y/N) |
|---|---|---|---|---|---|---|---|
| EU1-PM10 | Dry filter | N | 12.16 | 1.22 | 100 | N | N |
| EU1-PM2.5 | Dry filter | N | 12.16 | 1.22 | 100 | N | N |
| EU1-PM | Dry filter | Y | 12.16 | 1.22 | 100 | N | N |
| EU1-VOC | None | Y* | 92..57 | * | 100 | N | N |
| EU3-VOC | None | Y* | 144.61 | * | 100 | N | N |
| EU7-VOC | None | Y* | 389.9 | * | 100 | N | N |
| EU8-VOC | None | Y* | 14.1 | * | 100 | N | N |
| EU9-PM10 | Dry filter | N | 41.83 | 4.18 | 100 | N | N |
| EU9-PM2.5 | Dry filter | N | 41.83 | 4.18 | 100 | N | N |
| EU9-PM | Dry filter | Y | 41.83 | 4.18 | 100 | N | N |
| EU9-VOC | None | Y* | 148.4 | * | 100 | N | N |
| EU10-VOC | None | Y* | 82.12 | * | 100 | N | N |
| EU12-PM10 | Dry filter | N | 55.76 | 5.58 | 100 | N | N |
| EU12-PM2.5 | Dry filter | N | 55.76 | 5.58 | 100 | N | N |
| EU12-PM | Dry filter | Y | 55.76 | 5.58 | 100 | N | N |
| EU12-VOC | None | Y* | 151.85 | * | 100 | N | N |
| EU14-PM10 | Dry filter | N | 0.83 | 0.083 | 100 | N | N |
| EU14-PM2.5 | Dry filter | N | 0.83 | 0.083 | 100 | N | N |
| EU14-PM | Dry filter | Y | 0.83 | 0.083 | 100 | N | N |
| EU14-VOC | None | Y* | 38.66 | * | 100 | N | N |
| 220-01-PM10 | Dry filter | N | 7.73 | 0.77 | 100 | N | N |
| 220-01-PM2.5 | Dry filter | N | 7.73 | 0.77 | 100 | N | N |
| 220-01-PM | Dry filter | Y | 7.73 | 0.77 | 100 | N | N |
| 220-01-VOC | None | Y* | 12.02 | * | 100 | N | N |
| Touch up booth 250-PM10 | Dry filter | N | 3.33 | 0.33 | 100 | N | N |
| Touch up booth 250-PM2.5 | Dry filter | N | 3.33 | 0.33 | 100 | N | N |
| Touch up booth 250-PM | Dry filter | N | 3.33 | 0.33 | 100 | N | N |
| Touch up booth 250-VOC | None | Y* | 7.73 | * | 100 | N | N |

*There is a source wide limit of 249

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the existing units as part of this Part 70 permit renewal.

The Assembly Area EU3, Assembly Area EU7, Spray Coating EU9 and Frame Spray Coating EU12 each has uncontrolled PTE at greater than 100 percent of the applicable major Part 70 threshold for VOC and each also has an emissions limitation for VOC. However, none uses a control device to comply with the emission limitation. Therefore Compliance Assurance Monitoring (CAM) is not applicable to these emission units.

Though there are dry filters to control the PM/PM10/PM2.5 emissions from the surface coating operations, the uncontrolled PTE from each of these units is less than 100 tons per year. Therefore Compliance Assurance Monitoring (CAM) is not applicable

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**For NSPS/NESHAPs**

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

(b) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating Operations 40 CFR 60.390, Subpart MM, are not included in the permit for the recreational vehicle surface coating operations because this facility manufactures recreational vehicles, which do not meet the definition of an automobile or light duty truck.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, Subpart MMMM, (40 CFR 63.3880) are included in the permit for this source. Pursuant to 326 IAC 63.3881(c)(16) and (e)(2), surface coating of assembled on-road vehicles that meet the applicability criteria for the assembled on-road vehicle subcategory in plastic parts and products surface coating (40 CFR Part 63, Subpart PPPP) are not subject to the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, Subpart MMMM, (40 CFR 63.3880).

(1) NESHAP Subpart MMMM requirements for existing affected sources have been incorporated (except for the provisions that apply only to solvent recovery and magnet wire coating units that do not exist at the Source), at the request of the Permittee. The Permittee has chosen to comply with the requirements through compliance with 40 CFR 63, Subpart PPPP which is allowed because more than 90% of the operation (predominant activity) is surface coating of plastic parts, pursuant to:

(A) 40 CFR 63.3881 (c)(16); and

(B) 40 CFR 63.3881 (e)(2).

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Furniture Manufacturing Operations (40 CFR 63.800, Subpart JJ) are not included in the permit for this source. The cabinet material is purchased precoated, and then stapled and glued (with zero-HAP white carpenter's glue) into cabinets which are then mechanically fastened to the product. IDEM had determined pursuant to T039-6922-00062 issued on June 9, 1999, that just installing wood cabinets does not constitute a manufacturer of wood furniture or wood furniture components.

(e) This source is subject to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63.4480, Subpart PPPP because the source is a major source of HAPs and the painting operation applies surface coating to plastic parts and products, as defined in 40 CFR 63.4481(a). Pursuant to 40 CFR 63.4481(a)(1), the surface coating operation includes storage containers and mixing vessels that are used to store and mix thinners, additives and/or cleaning materials. Therefore, the requirements of National Emission Standards for Hazardous Air Pollutants for Plastic Parts and Products, (40 CFR 63.4480, Subpart PPPP) are included in the permit.

Pursuant to 40 CFR 63.4482, this source is an existing affected source because the construction of the source commenced prior to December 4, 2002 and the source is not reconstructed. The specific affected facilities include:

(1) One (1) frame spray coating area (Plant 105) used to coat metal, identified as EU12, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame spray coating area, is considered to be a surface coating facility at an existing affected source.

(2) Fourteen (14) thinning and reducing areas (Plants 4, 5, 7, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) used to coat metal, identified as EU14, installed prior to 1972, equipped with HVLP spray applicators and dry filters for overspray control, all areas (all plants) exhausted through general ventilation systems. In addition, Plant 105 has two (2) painting booths equipped with air-assisted airless and HVLP spray applicators with dry filters for overspray control, exhausted through stacks S5 and S6, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) thinning and reducing areas, are considered to be surface coating facilities at an existing affected source.

(3) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of caulks and sealants used to coat plastic, wood and metal, identified as EU7, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(4) Fourteen (14) spray coating areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of undercoating metal parts, identified as EU9, installed prior to 1972, equipped with airless or HVLP spray applicators and dry filters for overspray control, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) spray coating areas, are considered to be surface coating facilities at an existing affected source.

(5) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of general construction adhesives to metal parts, identified as EU3, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310 exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(6) Fourteen (14) assembly areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310) for the application of plumbing adhesives to plastic parts, identified as EU8, installed prior to 1972, all areas exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) assembly areas, are considered to be surface coating facilities at an existing affected source.

(7) Fourteen (14) manual product cleaning areas (Plants 4, 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310), for the manual wipe degreasing of plastic and metal product prior to application of decals, identified as EU10, installed prior to 1972, Plant 4 exhausted through vent V29 and Plants 5, 6, 101, 102, 103, 105, 110, 150, 205, 210, 220, 250, and 310, exhausted through general building ventilation, capacity: 10.0 vehicles per hour total. Under the

NESHAP 40 CFR Part 63, Subpart PPPP, the fourteen (14) manual product cleaning areas, are considered to be surface coating facilities at an existing affected source.

(8) One (1) frame coating paint spray booth, identified as 220-01, installed in 2003, using a black HAPs-free enamel coating in Plant 7 used to coat metal parts, equipped with HVLP applicators and dry filters for overspray control, exhausted to stack S9, capacity: 1.00 vehicle per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) frame coating paint spray booth, is considered to be a surface coating facility at an existing affected source.

(9) One (1) spray booth used to coat metal parts, identified as Plant 250 Touch-Up Repair Booth, installed in 2005, equipped with dry filters for overspray control, exhausted to stack S11, capacity: 0.75 vehicles per hour. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the one (1) spray booth is considered to be a surface coating facility at an existing affected source.

(10) One (1) paint shop, identified as EU1, with three (3) spray booths in Plant 220 used to coat plastic parts, approved for construction in 2007, with a maximum capacity of 0.25 units per hour each, using dry filters to control overspray, and exhausting to stacks S12, S13, and S14. Under the NESHAP 40 CFR Part 63, Subpart PPPP, the three (3) spray booths are considered to be surface coating facilities at an existing affected source.

Non applicable portions of the NESHAP will not be included in the permit. This source is subject to the following portions of Subpart PPPP.

(1) 40 CFR 63.4480

(2) 40 CFR 63.4481

(3) 40 CFR 63.4482 (a), (b), and (e)

(4) 40 CFR 63.4483 (b) and (d)

(5) 40 CFR 63.4490 (b)(1)

(6) 40 CFR 63.4491 (a)

(7) 40 CFR 63.4492 (a)

(8) 40 CFR 63.4493 (a)

(9) 40 CFR 63.4500 (a)(1), (b)

(10) 40 CFR 63.4510 (a), (b) and (c)(1) through 8(i)

(11) 40 CFR 63.4520 (a) (1) through (3)(i) through (iv), (a)(4) and (a)(5)

(12) 40 CFR 63.4530 (a), (b), (c) (1) through (2), (d), (e), (f) and (h)

(13) 40 CFR 63.4531

(14) 40 CFR 63.4540

(15) 40 CFR 63.4541

(16) 40 CFR 63.4542

(17) 40 CFR 63.4580

(18) 40 CFR 63.4581

(19) Table 2 to Subpart PPPP of Part 63

(20) Table 3 to Subpart PPPP of Part 63

(21) Table 4 to Subpart PPPP of Part 63

(22) Appendix A to Subpart PPPP of Part 63

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart PPPP.

(f) The requirements of the New Source Performance Standard for Surface Coating of Wood Building Products, 40 CFR 60.4680, Subpart QQQQ, are not included in the permit for the surface coating of wood products because this facility manufactures recreational vehicles and does not coat wood products used in the construction of residential, commercial or institutional buildings.

## State Rule Applicability - Entire Source

**326 IAC 2-2 (Prevention of Significant Deterioration (PSD)**
Pursuant to T039-6922-00062 issued on June 9, 1999, the source-wide VOC emissions including cleanup solvents were limited to 247 tons per twelve consecutive month period with compliance determined at the end of each month. Modifications in 2003, 2005 and 2007 have been incorporated into the source-wide VOC limit of 249 tons per year. There have been no other polluants that have a PTE of greater than 250 tpy, therefore the source, which is not one of the twenty-eight (28) listed source categories is a minor source pursuant to 326 IAC 2-2 PSD.

This is a Title I change.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**
The operation of units EU1, EU3, EU7,EU8, EU9, EU10, EU12 and EU14 will emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 would apply to the facility, however, pursuant to 326 IAC 2-4.1-1(b)(2), because these facilities are specifically regulated by NESHAP 40 CFR 63, Subpart PPPP, which was issued pursuant to Section 112(d) of the CAA, these facilities are exempt from the requirements of 326 2-4.1.

**326 IAC 2-6 (Emission Reporting)**
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM10 is less than 250 tons per year; and the potential to emit of CO, NOx, and SO2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2013 and every three (3) years 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 the 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.

**326 IAC 6.5 PM Limitations Except Lake County**
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

**State Rule Applicability – Individual Facilities**

**326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**
(a) Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) frame spray coating area, the fourteen (14) thinning and reducing areas, the fourteen (14) spray coating areas for the application of undercoating, the one (1) frame coating paint spray booth, the one (1) spray booth, identified as EU12, EU14, EU9, 220-01, and Plant 250 Touch-Up Repair Booth, and the three (3) spray booths in paint shop EU1, respectively, shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

(b) The welding operations at this source consume less than 625 pounds of rod or wire per day. The torch cutting operations at this source source cut less than 3,400 inches per hour of stock one inch thick or less. Pursuant to 326 IAC 6-3-1(b)(9) and (10), the welding and cutting operations are exempt under the requirements of 326 IAC 6-3-2.

(c) The wood working operation has uncontrolled particulate emissions less than 0.551 lb/hr each and, therefore, are exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(b)(14).

**326 IAC 8-1-6 (Volatile Organic Compounds (BACT))**
(a) Emission Units identified as EU12, EU14, EU7, EU9, EU3, EU8 and EU10 were installed prior to the applicability date of January 1, 1980 and emission units identified as 220-01 and Plant 250 Touch-Up Booth have potential VOC emissions of less than twenty five (25) tons per year each. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to these facilities.

(b) The volatile organic compound (VOC) delivered to the applicators including clean-up solvents for each of the three spray booths in the paint shop in Plant 220, identified as EU1, shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this limit renders the requirements of 326 IAC 8-1-6 (BACT) not applicable.

**326 IAC 8-2-9 (Miscellaneous Metal Coating)**
(a) Pursuant to 326 IAC 8-2-1(a)(3), emission units EU7, EU9, EU 12 and EU14 are subject to the provisions of 326 IAC 8-2-9 because they were existing as of July 1, 1990,are located in Elkhart County, and each have actual emissions greater than fifteen (15) pounds of VOC per day, before add-on controls. The volatile organic compound (VOC)

content of the coating delivered to the applicators shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings when coating metal.

Pursuant to 326 IAC 8-2-1 (a)(4), emission unit 220-01 is subject to the provisions of 326 IAC 8-2-9 because construction was commenced after July 1, 1990 and the facility has actual emissions of greater than fifteen (15) pounds per day before add-on controls.

(b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

(c) The materials used in EU7, EU9, and 220-01 can comply with these requirements based on the MSDS submitted by the source and the materials used in EU12 and EU14 combined with EU7, EU9, and 220-01 will comply with the requirements based on a daily volume weighted average. The source shall therefore comply with this rule by averaging the VOC content of the materials used to coat metal on a daily basis. The daily volume weighted average of VOC content shall be calculated using the following formula, where n is the number of coatings (c):

$$\frac{\sum_{c=1}^{c=n} \text{coating c (gal/day)} \times \text{VOC content of c (lbs/gal, less water)}}{\sum_{c=1}^{c=n} \text{coating c (gal/day)}}$$

(d) 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) does not apply to Emission Units identified as EU1, EU8 and Plant 220 because the units only coat plastic parts.

**326 IAC 8-2-12 (Wood Furniture and Cabinet Coatings (VOC)**
Pursuant to T039-6922-00062, issued on June 9, 1999, the cabinet material is purchased precoated, stapled and glued (with zero-HAP white carpenter's glue) into cabinets, which are then mechanically fastened to the product. IDEM, OAQ determined that just installing wood cabinets does not constitute a manufacturer of wood furniture or wood furniture component. Therefore, the requirements of 326 IAC 8-2-12 are not included in this permit.

**326 IAC 8-6 (Organic Solvent Emission Limitation)**
The emission units, identified as EU12, EU14, EU7, EU9, EU3, EU8, and EU10, which have VOC emissions greater than one hundred (100) tons per year, were installed prior to the start of the applicability date of October 7, 1974 and emission units identified as 220-01 and Plant 250 Touch-Up Booth were installed after the ending date of applicability which is January 1, 1980. Therefore, the requirements of 326 IAC 8-6 are not included in this permit for these facilities.

**326 IAC 20-81 (Surface Coating of Plastic Parts and Products)**
This rule incorporates by reference the requirements of 40 CFR 63, Subpart PPPP (National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products).

## Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination

Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

**The compliance determination requirements are as follows:**

Compliance with the VOC content limit in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings, used to coat metals, on a daily basis. This volume weighted average shall be determined by the following equation:

$$\frac{\sum_{c=1}^{c=n} \text{coating c (gal/day)} \times \text{VOC content of c (lbs/gal, less water)}}{\sum_{c=1}^{c=n} \text{coating c (gal/day)}}$$

The compliance status with the VOC content and usage limitations contained in Conditions D.1.1, D.1.2, and D.1.4 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. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**The compliance monitoring requirements applicable to this source are as follows:**

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray exhaust from the one (1) frame spray coating area, the one (1) frame coating paint spray booth, the one (1) spray booth, identified as EU12, EU14, EU9, 220-01, and Plant 250 Touch-Up Repair Booth, and the three (3) spray booths in paint shop EU1, respectively, while one or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take a 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 shall be considered a deviation from this permit.

(b) Monthly inspections shall be performed of the coating emissions from the exhaust and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emission is observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this permit. Failure to take response steps shall be considered a deviation from this permit.

## Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T039-30817-00062. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

(a) Multiple Conditions
IDEM, OAQ has decided that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore, all references to timelines have been revised to "no later than" or "not later than" except for the timelines in subparagraphs (b)(4) and (b)(5) of Section B - Emergency Provisions and Section B - Annual Fee Payment, in which the underlying rules state "within".

(b) Multiple Conditions
326 IAC 2-7 requires that "a responsible official" perform certain actions. 326 IAC 2-7-1(34) allows for multiple people to meet the definition of "responsible official." Therefore, IDEM, OAQ is revising all instances of "the responsible official" to read "a responsible official".

(c) Multiple Conditions
IDEM, OAQ has decided to clarify what rule requirements a certification needs to meet.

(d) Section B - Duty to Provide Information
IDEM, OAQ has revised Section B - Duty to Provide Information by removing the statement that the submittal by the Permittee requires the certification by the "responsible official".

(e) Section B - Certification
To clarify that Section B - Certification only states what a certification must be, IDEM, OAQ has revised the condition. In addition IDEM, OAQ has decided to clarify Section B - Certification to be consistent with the rule.

(f) Section B - Preventive Maintenance Plan
IDEM, OAQ has added a new paragraph (b) to handle a future situation where the Permittee adds units that need preventive maintenance plans developed. IDEM, OAQ has also decided to clarify other aspects of Section B - Preventive Maintenance Plan.

(g) Section B - Emergency Provisions
IDEM, OAQ has changed references of Compliance Section to Compliance and Enforcement Branch.

(h) Section B - Deviation from Permit Requirements and Section C - General Reporting Requirements
IDEM, OAQ has decided that having a separate condition for the reporting of deviations is unnecessary. Therefore, Section B - Deviation from Permit Requirements and Conditions has been removed and the requirements of that condition have been added to Section C - General Reporting Requirements. Paragraph (d) of Section C - General Reporting Requirements has been removed because IDEM, OAQ already states the timeline and certification needs of each report in the condition requiring the report. Subparagraph (g)(4), which is now (f)(4), has been revised to match the underlying rule language.

(i) Section B - Permit Renewal
IDEM, OAQ has decided to state which rule establishes the authority to set a deadline for the Permittee to submit additional information. Therefore, Section B - Permit Renewal has been revised.

(j) Section B - Permit Revision Under Economic Incentives and Other Programs
IDEM, OAQ has decided to state that no notice is required for approved changes in Section B - Permit Revision Under Economic Incentives and Other Programs.

(k) Section C - Opacity
IDEM, OAQ has added 326 IAC 5-1-1 to the exception clause of Section C - Opacity, since 326 IAC 5-1-1 does list exceptions.

(l) Section C - Incineration
IDEM, OAQ has revised Section C - Incineration to more closely reflect the two underlying rules.

(m) Section C - Performance Testing
IDEM, OAQ has removed the first paragraph of Section C - Performance Testing due to the fact that specific testing conditions elsewhere in the permit will specify the timeline and procedures.

(n) Section C - Compliance Monitoring
IDEM, OAQ has revised Section C - Compliance Monitoring. The reference to recordkeeping has been removed due to the fact that other conditions already address recordkeeping. The voice of the condition has been changed to clearly indicate that it is the Permittee that must follow the requirements of the condition.

(o) Section C - Monitoring Methods
IDEM, OAQ has removed Section C - Monitoring Methods. The conditions that require the monitoring or testing, if required, state what methods shall be used.

(p) Section C - Response to Excursions or Exceedances
IDEM, OAQ has revised Section C - Response to Excursions or Exceedances. The introduction sentence has been added to clarify that it is only when an excursion or exceedance is detected that the requirements of this condition need to be followed. The word "excess" was added to the last sentence of paragraph (a) because the Permittee only has to minimize excess emissions. The middle of paragraph (b) has been deleted as it was duplicative of paragraph (a). The phrase "or are returning" was added to subparagraph (b)(2) as this is an acceptable response assuming the operation or emission unit does return to normal or its usual manner of operation. The phrase "within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable" was replaced with "normal or usual manner of operation" because the first phrase is just a limited list of the second phrase. The recordkeeping required by paragraph (e) was changed to require only records of the response because the previously listed items are required to be recorded elsewhere in the permit.

(q) Section C - Actions Related to Noncompliance Demonstrated by a Stack Test
IDEM, OAQ has revised Section C - Actions Related to Noncompliance Demonstrated by a Stack Test. The requirements to take response steps and minimize excess emissions have been removed because Section C - Response to Excursions or Exceedances already requires response steps related to exceedances and excess emissions minimization. The start of the timelines was revised from "the receipt of the test results" to "the date of the test". There was confusion if the "receipt" was by IDEM, the Permittee or someone else. Since the start of the timelines has been moved up, the length of the timelines was increased. The new timelines require action within a comparable timeline; and the new timelines still ensure that the Permittee will return to compliance within a reasonable timeframe.

(r) Section C - Emission Statement
IDEM, OAQ decided to remove paragraph (c) of Section C - Emission Statement since it was duplicative of the requirement in Section C - General Reporting Requirements.

(s) Section C - General Record Keeping Requirements
The voice of paragraph (b) of Section C - General Record Keeping Requirements has been changed to clearly indicate that it is the Permittee that must follow the requirements of the paragraph.

(t) Section C - Compliance with 40 CFR 82 and 326 IAC 22-1
IDEM, OAQ has decided to simplify the referencing in Section C - Compliance with 40 CFR 82 and 326 IAC 22-1.

(u) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section A - General Information, Section A - Emission Units and Pollution Control Equipment Summary, Section A - Specifically Regulated Insignificant Activities, Section B - Preventative Maintenance Plan, Section B - Emergency Provisions, Section B - Operational Flexibility, Section B - Advanced Source Modification Approval, Section C - Risk Management Plan, the Facility Descriptions, and Section D - Preventative Maintenance Plan.

The following changes have been made to Section D of the permit:

(a) For clarity, IDEM, OAQ has changed references to the general conditions such as "in accordance with Section B", "in accordance with Section C", or other similar language to "Section C...contains the Permittee's obligations with regard to the records required by this condition.

(b) IDEM, OAQ has decided that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore, all references to timelines have been revised to "no later than" or "not later than".

(c) The word "status" has been added to the record keeping requirements and reporting requirements. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this.

(d) 326 IAC 2-7 requires that "a responsible official" perform certain actions. 326 IAC 2-7-1(34) allows for multiple people to meet the definition of "responsible official." Therefore, IDEM, OAQ is revising all instances of "the responsible official" to read "a responsible official".

(e) IDEM, OAQ has decided to clarify what rule requirements a certification needs to meet.

The permit has been revised as follows:

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan~~, in accordance with Section B - Preventive Maintenance Plan, of this permit,~~ is required for this facility. **Section B - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.**

D.1.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray exhaust from the one (1) frame spray coating area, the one (1) frame coating paint spray booth, the one (1) spray booth, identified as EU12, EU14, EU9, 220-01, and Plant 250 Touch-Up Repair Booth, and the three (3) spray booths in paint shop EU1, respectively, while one or more of the booths are in operation. If a condition

exists which should result in a response step, the Permittee shall take **a** reasonable response~~ steps~~. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this ~~permit~~ **condition**. Failure to take response shall be considered a deviation from this permit.

(b) Monthly inspections shall be performed of the coating emissions from the exhaust and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emission is observed, the Permittee shall take **a** reasonable response~~ steps~~. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.9 Record Keeping Requirements

(a) To document **the** compliance **status** with Conditions D.1.1, D.1.2, and D.1.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1), (2), (4), and (5) shall be taken monthly and (3) taken daily and shall be complete and sufficient to establish compliance with the VOC content limits and the VOC emission limits established in Conditions D.1.1, D.1.2, and D.1.4.

***

(b) To document **the** compliance **status** with Condition D.1.7, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections. The Permittee shall include in its record when an inspection or observation is not taken and the reason for lack of inspection or observation (e.g., the process did not operate that day, week, or month).

(c) ~~All records shall be maintained in accordance with~~ Section C - General Record Keeping Requirements~~,~~ of this permit **contains the Permittee's obligation with regard to the records required by this condition**.

D.1.10 Reporting Requirements

The Permittee shall submit a quarterly summary of the information to document the compliance status with Condition D.1.1 and D.1.4. These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(34).

## 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 August 22, 2011.

## Conclusion

The operation of this a stationary travel trailer, camper, para-transit vehicle, and motor home manufacturing source shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T039-30817-00062.

## IDEM Contact

(a) Questions regarding this proposed permit can be directed to Teresa Freeman 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) 234-1243 or toll free at 1-800-451-6027 extension 4-1243.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emission Calculations**
**Summary**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 4654
**Permit Number:** T039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

**Uncontrolled**

| | Potential to Emit (tons/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Process/emission unit | PM | PM-10 | PM-2.5 | SO2 | NOX | VOC | CO | GHGs | HAPs combined * |
| Paint Shop EU1 | 12.16 | 12.16 | 12.16 | - | - | 92.57 | - | - | 38.27 |
| Assembly Area EU3 | 0.00 | 0.00 | 0.00 | - | - | 144.61 | - | - | 144.61 |
| Assembly Area EU7 | 0.00 | 0.00 | 0.00 | - | - | 972.115 | - | - | 425.22 |
| Assembly Area EU8 | 0.00 | 0.00 | 0.00 | - | - | 14.073 | - | - | 0.00 |
| Spray Coating EU9 | 41.83 | 41.83 | 41.83 | - | - | 148.38 | - | - | 148.38 |
| Manual product cleaning EU10 | 0.00 | 0.00 | 0.00 | - | - | 82.12 | - | - | 74.59 |
| Frame spray coating EU12 | 55.76 | 55.76 | 55.76 | - | - | 151.85 | - | - | 151.85 |
| Thinning/Reducing EU14 | 0.83 | 0.83 | 0.83 | - | - | 38.66 | - | - | 38.66 |
| Frame coating 220-01 | 7.73 | 7.73 | 7.73 | - | - | 12.02 | - | - | 12.02 |
| Touch up Booth 250 | 1.45 | 1.45 | 1.45 | - | - | 7.52 | - | - | 7.52 |
| Combustion Units | 0.77 | 3.09 | 3.09 | 0.24 | 40.65 | 2.24 | 34.14 | 49072.52 | 0.77 |
| Woodworking | 2.95 | 2.95 | 2.95 | - | - | - | - | - | - |
| Welding | 0.31 | 0.31 | 0.31 | - | - | - | - | - | 0.01 |
| **Total PTE** | **123.79** | **126.11** | **126.11** | **0.24** | **40.65** | **1666.15** | **34.14** | **49072.52** | **1041.90** |

**Controlled**

| | Potential to Emit (tons/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Process/emission unit | PM | PM-10 | PM-2.5 | SO2 | NOX | VOC | CO | GHGs | HAPs combined* |
| Paint Shop EU1 | 1.22 | 1.22 | 1.22 | - | - | | - | - | 38.27 |
| Assembly Area EU3 | 0.00 | 0.00 | 0.00 | - | - | | - | - | 144.61 |
| Assembly Area EU7 | 0.00 | 0.00 | 0.00 | - | - | | - | - | 425.22 |
| Assembly Area EU8 | 0.00 | 0.00 | 0.00 | - | - | | - | - | 0.00 |
| Spray Coating EU9 | 4.18 | 4.18 | 4.18 | - | - | 247.00 | - | - | 148.38 |
| Manual product cleaning EU10 | 0.00 | 0.00 | 0.00 | - | - | | - | - | 74.59 |
| Frame spray coating EU12 | 5.58 | 5.58 | 5.58 | - | - | | - | - | 151.85 |
| Thinning/Reducing EU14 | 0.083 | 0.083 | 0.083 | - | - | | - | - | 38.66 |
| Frame coating 220-01 | 0.77 | 0.77 | 0.77 | - | - | | - | - | 12.02 |
| Touch up Booth 250 | 0.14 | 0.14 | 0.14 | - | - | | - | - | 7.52 |
| Combustion Units | 0.77 | 3.09 | 3.09 | 0.24 | 40.65 | 2.24 | 34.14 | 49072.52 | 0.77 |
| Woodworking | 0.15 | 0.15 | 0.15 | - | - | - | - | - | - |
| Welding | 0.31 | 0.31 | 0.31 | - | - | - | - | - | 0.01 |
| **Total PTE** | **13.20** | **15.52** | **15.52** | **0.24** | **40.65** | **249.24** | **34.14** | **49072.52** | **1041.90** |

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations EU1**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Significant Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Booth ID | Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | Pounds VOC per gallon of coating less water | Pounds VOC per gallon of coating | Potential VOC (lbs/hour) | Potential VOC (lbs/day) | Potential VOC (tons/year) | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S12 | Base Coat 2 | 7.47 | 55.00% | 0.00% | 55.00% | 0.00% | 13.20% | 4.00000 | 0.250 | 4.11 | 4.11 | 4.11 | 98.60 | 18.00 | 3.68 | 3.68 | 3.68 | 75% |
| S12 | Sealer | 10.28 | 45.10% | 0.00% | 45.10% | 0.00% | 26.00% | 0.25000 | 0.250 | 4.64 | 4.64 | 0.29 | 6.95 | 1.27 | 0.39 | 0.39 | 0.39 | 75% |
| S12 | Clear Coat | 8.03 | 54.20% | 0.00% | 54.20% | 0.00% | 45.50% | 1.67000 | 0.250 | 4.35 | 4.35 | 1.82 | 43.61 | 7.96 | 1.68 | 1.68 | 1.68 | 75% |
| S12 | PO Primer | 7.00 | 99.01% | 0.00% | 99.01% | 0.00% | 1.00% | 0.17000 | 0.250 | 6.93 | 6.93 | 0.29 | 7.07 | 1.29 | 0.00 | 0.00 | 0.00 | 75% |
| S12 | Wash Primer | 7.24 | 86.20% | 0.00% | 86.20% | 0.00% | 12.30% | 0.17000 | 0.250 | 6.24 | 6.24 | 0.27 | 6.37 | 1.16 | 0.05 | 0.05 | 0.05 | 75% |
| S12 | Pre Cleaner | 6.34 | 100.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.17000 | 0.250 | 6.34 | 6.34 | 0.27 | 6.47 | 1.18 | 0.00 | 0.00 | 0.00 | 75% |
| S13 | Base Coat 2 | 7.47 | 86.80% | 0.00% | 55.00% | 0.00% | 9.90% | 4.00000 | 0.250 | 4.11 | 4.11 | 4.11 | 98.60 | 18.00 | 1.08 | 1.08 | 1.08 | 75% |
| S13 | Sealer | 10.28 | 45.10% | 0.00% | 45.10% | 0.00% | 26.00% | 0.25000 | 0.250 | 4.64 | 4.64 | 0.29 | 6.95 | 1.27 | 0.39 | 0.39 | 0.39 | 75% |
| S13 | Clear Coat | 8.03 | 54.50% | 0.00% | 54.20% | 0.00% | 39.00% | 1.67000 | 0.250 | 4.35 | 4.35 | 1.82 | 43.61 | 7.96 | 1.67 | 1.67 | 1.67 | 75% |
| S13 | PO Primer | 7.00 | 99.01% | 0.00% | 99.01% | 0.00% | 1.00% | 0.17000 | 0.250 | 6.93 | 6.93 | 0.29 | 7.07 | 1.29 | 0.00 | 0.00 | 0.00 | 75% |
| S13 | Wash Primer | 7.24 | 87.80% | 0.00% | 86.20% | 0.00% | 6.00% | 0.17000 | 0.250 | 6.24 | 6.24 | 0.27 | 6.37 | 1.16 | 0.04 | 0.04 | 0.04 | 75% |
| S13 | Pre Cleaner | 6.34 | 100.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.17000 | 0.250 | 6.34 | 6.34 | 0.27 | 6.47 | 1.18 | 0.00 | 0.00 | 0.00 | 75% |
| S14 | Base Coat 2 | 7.47 | 86.80% | 0.00% | 55.00% | 0.00% | 9.90% | 4.00000 | 0.250 | 4.11 | 4.11 | 4.11 | 98.60 | 18.00 | 1.08 | 1.08 | 1.08 | 75% |
| S14 | Sealer | 10.28 | 45.10% | 0.00% | 45.10% | 0.00% | 26.00% | 0.25000 | 0.250 | 4.64 | 4.64 | 0.29 | 6.95 | 1.27 | 0.39 | 0.39 | 0.39 | 75% |
| S14 | Clear Coat | 8.03 | 54.50% | 0.00% | 54.20% | 0.00% | 39.00% | 1.67000 | 0.250 | 4.35 | 4.35 | 1.82 | 43.61 | 7.96 | 1.67 | 1.67 | 1.67 | 75% |
| S14 | PO Primer | 7.00 | 99.01% | 0.00% | 99.01% | 0.00% | 1.00% | 0.17000 | 0.250 | 6.93 | 6.93 | 0.29 | 7.07 | 1.29 | 0.00 | 0.00 | 0.00 | 75% |
| S14 | Wash Primer | 7.24 | 87.80% | 0.00% | 86.20% | 0.00% | 6.00% | 0.17000 | 0.250 | 6.24 | 6.24 | 0.27 | 6.37 | 1.16 | 0.04 | 0.04 | 0.04 | 75% |
| S14 | Pre Cleaner | 6.34 | 100.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.17000 | 0.250 | 6.34 | 6.34 | 0.27 | 6.47 | 1.18 | 0.00 | 0.00 | 0.00 | 75% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | | **21.13** | **507.21** | **92.57** | **12.16** | **12.16** | **12.16** | |
| | | | | | | | | | | Control Efficiency 90% | | | | | | | | |
| | | | | | | | | | | Controlled PM/PM10/PM2.5 | | | | | **1.22** | **1.22** | **1.22** | |

**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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

**Appendix A: Emissions Calculations**
**HAPs**
**From Surface Coating Operations EU1**
**Company Name: Forest River, Inc. Coachmen Division**
**Address City IN Zip: 423 N. Main Street, Middlebury, IN 46540**
**Significant Permit Number: 039-30817-00062**
**Reviewer: Teresa Freeman**
**Date: November 28, 2011**

| Booth ID | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (units/hour) | Weight % Ethyl Benzene | Weight % Toluene | Weight % Hexamethylene Diisocyanate | Weight % Xylene | Weight % Cumene | Weight % Methyl Isobutyl Ketone | Weight % Formaldehyde | Weight % Methanol | Weight % Phenol | Combined HAPs %** | Ethyl Benzene (ton/yr) | Toluene (ton/yr) | Hexamethylene Diisocyanate (ton/yr) | Xylene (ton/yr) | Cumene (ton/yr) | Methyl Isobutyl Ketone (ton/yr) | Formaldehyde (ton/yr) | Methanol (ton/yr) | Phenol (ton/yr) | Combined HAPs (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S12 | Base Coat 2 | 7.47 | 4.00 | 0.25 | 24.00% | 1.00% | 1.00% | 1.07% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 27.07% | 7.852 | 0.327 | 0.327 | 0.350 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 8.857 |
| S12 | Sealer | 10.28 | 0.25 | 0.25 | 1.54% | 4.00% | 3.00% | 6.58% | 15.00% | 3.99% | 0.00% | 0.00% | 0.00% | 34.11% | 0.043 | 0.113 | 0.084 | 0.185 | 0.422 | 0.112 | 0.000 | 0.000 | 0.000 | 0.960 |
| S12 | Clear Coat | 8.03 | 1.67 | 0.25 | 0.22% | 0.01% | 0.01% | 0.59% | 0.21% | 0.00% | 0.00% | 0.00% | 0.00% | 1.04% | 0.032 | 0.001 | 0.001 | 0.087 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 |
| S12 | PO Primer | 7.00 | 0.17 | 0.25 | 25.00% | 0.00% | 0.00% | 65.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.326 | 0.326 | 0.326 | 0.326 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.303 |
| S12 | Wash Primer | 7.24 | 0.17 | 0.25 | 1.45% | 7.27% | 0.00% | 5.82% | 0.00% | 16.48% | 0.03% | 0.31% | 0.11% | 31.47% | 0.020 | 0.098 | 0.000 | 0.078 | 0.000 | 0.222 | 0.000 | 0.004 | 0.001 | 0.424 |
| S12 | Pre Cleaner | 6.34 | 0.17 | 0.25 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.180 |
| S13 | Base Coat 2 | 7.47 | 4.00 | 0.25 | 24.00% | 1.00% | 1.00% | 1.07% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 27.07% | 7.852 | 0.327 | 0.327 | 0.350 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 8.857 |
| S13 | Sealer | 10.28 | 0.25 | 0.25 | 1.54% | 4.00% | 3.00% | 6.58% | 15.00% | 3.99% | 0.00% | 0.00% | 0.00% | 34.11% | 0.043 | 0.113 | 0.084 | 0.185 | 0.422 | 0.112 | 0.000 | 0.000 | 0.000 | 0.960 |
| S13 | Clear Coat | 8.03 | 1.67 | 0.25 | 0.22% | 0.01% | 0.01% | 0.59% | 0.21% | 0.00% | 0.00% | 0.00% | 0.00% | 1.04% | 0.032 | 0.001 | 0.001 | 0.087 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 |
| S13 | PO Primer | 7.00 | 0.17 | 0.25 | 25.00% | 0.00% | 0.00% | 65.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.326 | 0.326 | 0.326 | 0.326 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.303 |
| S13 | Wash Primer | 7.24 | 0.17 | 0.25 | 1.45% | 7.27% | 0.00% | 5.82% | 0.00% | 16.48% | 0.03% | 0.31% | 0.11% | 31.47% | 0.020 | 0.098 | 0.000 | 0.078 | 0.000 | 0.222 | 0.000 | 0.004 | 0.001 | 0.424 |
| S13 | Pre Cleaner | 6.34 | 0.17 | 0.25 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.180 |
| S14 | Base Coat 2 | 7.47 | 4.00 | 0.25 | 24.00% | 1.00% | 1.00% | 1.07% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 27.07% | 7.852 | 0.327 | 0.327 | 0.350 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 8.857 |
| S14 | Sealer | 10.28 | 0.25 | 0.25 | 1.54% | 4.00% | 3.00% | 6.58% | 15.00% | 3.99% | 0.00% | 0.00% | 0.00% | 34.11% | 0.043 | 0.113 | 0.084 | 0.185 | 0.422 | 0.112 | 0.000 | 0.000 | 0.000 | 0.960 |
| S14 | Clear Coat | 8.03 | 1.67 | 0.25 | 0.22% | 0.01% | 0.01% | 0.59% | 0.21% | 0.00% | 0.00% | 0.00% | 0.00% | 1.04% | 0.032 | 0.001 | 0.001 | 0.087 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 |
| S14 | PO Primer | 7.00 | 0.17 | 0.25 | 25.00% | 0.00% | 0.00% | 65.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.326 | 0.326 | 0.326 | 0.326 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.303 |
| S14 | Wash Primer | 7.24 | 0.17 | 0.25 | 1.45% | 7.27% | 0.00% | 5.82% | 0.00% | 16.48% | 0.03% | 0.31% | 0.11% | 31.47% | 0.020 | 0.098 | 0.000 | 0.078 | 0.000 | 0.222 | 0.000 | 0.004 | 0.001 | 0.424 |
| S14 | Pre Cleaner | 6.34 | 0.17 | 0.25 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.180 |
| | **Total State Potential Emissions** | | | | | | | | | | | | | | **24.82** | **2.59** | **2.22** | **3.08** | **1.36** | **1.10** | **0.10** | **0.11** | **0.10** | **38.27** |

*Note: This is "as applied" based on the calculations provided by the source and verified by IDEM.

**Note: Combined HAPs % is based on worst case scenario.

**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

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**General Construction Adhesives-EU3**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency | Material Substrate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Construction adhesive 40 | 9.5 | 33.00% | 0.0% | 33.0% | 0.0% | 0.00% | 0.29300 | 10.000 | 3.15 | 3.15 | 9.22 | 221.38 | 40.40 | 0.00 | 0.00 | 0.00 | NA | 100% | wood/ fiberglass |
| (2)676 High perf. Spray Adhesive | 5.7 | 82.30% | 0.0% | 82.3% | 0.0% | 12.30% | 0.49300 | 10.000 | 4.69 | 4.69 | 23.13 | 555.05 | 101.30 | 0.00 | 0.00 | 0.00 | 38.14 | 100% | wood/ fiberglass/ fabric/ insulation |
| Hartco 80 Adhesive | 9.8 | 28.00% | 22.0% | 6.0% | 25.9% | 0.00% | 0.02400 | 10.000 | 0.80 | 0.59 | 0.14 | 3.40 | 0.62 | 0.00 | 0.00 | 0.00 | NA | 100% | wood |
| Hartco 50 Adhesive | 10.5 | 21.72% | 13.0% | 8.7% | 16.4% | 0.00% | 0.01200 | 10.000 | 1.09 | 0.92 | 0.11 | 2.64 | 0.48 | 0.00 | 0.00 | 0.00 | NA | 100% | wood |
| Hartco Plank Adhesive 40 | 11.7 | 38.00% | 0.0% | 38.0% | 0.0% | 0.00% | 0.00900 | 10.000 | 4.43 | 4.43 | 0.40 | 9.57 | 1.75 | 0.00 | 0.00 | 0.00 | NA | 100% | wood |
| Tac Bond 724 | 8.3 | 39.00% | 37.0% | 2.0% | 36.0% | 59.00% | 0.00900 | 10.000 | 0.26 | 0.17 | 0.01 | 0.36 | 0.07 | 0.00 | 0.00 | 0.00 | 0.28 | 100% | wood |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | **33.02** | **792.39** | **144.61** | **0.00** | **0.00** | **0.00** | | | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations**
**HAP Emission Calculations-EU3**

**Company Name:** **Forest River, Inc. Coachmen Division**
**Address City IN Zip:** **423 N. Main Street, Middlebury, IN 46540**
**Permit Number:** **039-30817-00062**
**Permit Reviewer:** **Teresa Freeman**
**Date:** **November 28, 2011**

| Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Methylene Chloride | Weight % Glycol Ethers | Weight % Ethyl Benzene | Weight % MIBK | Weight % Phenol | Methylene Chloride Emissions (ton/yr) | Glycol Ethers Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) | MIBK Emissions (ton/yr) | Phenol Emissions (ton/yr) | Combined HAPs (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Construction adhesive 40 | 9.54 | 0.29300 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (2)676 High perf. Spray Adhesive | 5.70 | 0.49300 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hartco 80 Adhesive | 9.83 | 0.02400 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hartco 50 Adhesive | 10.50 | 0.01200 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hartco Plank Adhesive 40 | 11.66 | 0.00900 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Tac Bond 724 | 8.25 | 0.00900 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | | **"Worst Case" Individual HAP** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** |
| | | | | | | | | **"Worst Case" Total HAPs** | **0.0** | | | | | |

**METHODOLOGY**

Total State Potential Emissions

**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

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**Caulk & Sealants-EU7**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Silicone Glazing Sealant (all colors) | 8.66 | 3.75% | 0.0% | 3.75% | 0.0% | NA | 0.04200 | 10.000 | 0.32 | 0.32 | 0.14 | 3.27 | 0.60 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Vulkum Polyurethane Sealant (616 & 626) | 11.00 | 15.00% | 0.0% | 15.0% | 0.0% | 90.00% | 0.11000 | 10.000 | 1.65 | 1.65 | 1.82 | 43.56 | 7.95 | 0.00 | 0.00 | 0.00 | 1.83 | 100% |
| Pemco | 8.83 | 0.00% | 0.0% | 0.0% | 0.0% | 56.00% | 0.07100 | 10.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100% |
| SM 5522 | 8.80 | 32.74% | 0.0% | 32.7% | 0.0% | 62.70% | 0.02700 | 10.000 | 2.88 | 2.88 | 0.78 | 18.67 | 3.41 | 0.00 | 0.00 | 0.00 | 4.60 | 100% |
| Parasil 929 thru 936 | 8.66 | 3.50% | 0.0% | 3.5% | 0.0% | 50.00% | 0.05100 | 10.000 | 0.30 | 0.30 | 0.15 | 3.71 | 0.68 | 0.00 | 0.00 | 0.00 | 0.61 | 100% |
| Butyl Caulk | 10.50 | 25.00% | 0.0% | 25.0% | 0.0% | NA | 0.00400 | 10.000 | 2.63 | 2.63 | 0.11 | 2.52 | 0.46 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Colorimetric Polyethane Sealant | 10.41 | 3.30% | 0.0% | 3.3% | 0.0% | 96.70% | 0.05600 | 10.000 | 0.34 | 0.34 | 0.19 | 4.62 | 0.84 | 0.00 | 0.00 | 0.00 | 0.36 | 100% |
| Colorimetric Silicone (all colors) | 8.66 | 5.00% | 0.0% | 5.0% | 0.0% | 95.00% | 0.18500 | 10.000 | 0.43 | 0.43 | 0.80 | 19.23 | 3.51 | 0.00 | 0.00 | 0.00 | 0.46 | 100% |
| Colorimetric Caulk (gray) | 8.33 | 37.50% | 0.0% | 37.5% | 0.0% | 60.00% | 0.00000 | 10.000 | 3.12 | 3.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.21 | 100% |
| Sikaflex 255-FC & 268-543 | 9.80 | 6.00% | 0.0% | 6.0% | 0.0% | 97.00% | 0.06800 | 10.000 | 0.59 | 0.59 | 0.40 | 9.60 | 1.75 | 0.00 | 0.00 | 0.00 | 0.61 | 100% |
| Parbond Clear | 7.50 | 55.00% | 0.0% | 55.0% | 0.0% | NA | 0.00800 | 10.000 | 4.13 | 4.13 | 0.33 | 7.92 | 1.45 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Pemco Roof Sealant (all colors) | 7.25 | 45.00% | 0.0% | 45.0% | 0.0% | NA | 0.01700 | 10.000 | 3.26 | 3.26 | 0.55 | 13.31 | 2.43 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Dicor Roof Sealant | 10.13 | 46.00% | 0.0% | 46.0% | 0.0% | 70.00% | 0.91600 | 10.000 | 4.66 | 4.66 | 42.68 | 1024.41 | 186.95 | 0.00 | 0.00 | 0.00 | 6.66 | 100% |
| Ener 10 | 8.00 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.00400 | 10.000 | 8.00 | 8.00 | 0.32 | 7.68 | 1.40 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Ener 43 | 10.00 | 1.00% | 0.0% | 1.0% | 0.0% | 0.00% | 0.05809 | 10.000 | 0.10 | 0.10 | 0.06 | 1.39 | 0.25 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 502 LSW | 11.30 | 40.50% | 0.0% | 40.5% | 0.0% | 0.00% | 0.63082 | 10.000 | 4.58 | 4.58 | 28.87 | 692.87 | 126.45 | 0.00 | 0.00 | 0.00 | NA | 100% |
| CTI-16-36 | 8.50 | 0.00% | 0.0% | 0.0% | 0.0% | 0.00% | 0.70700 | 10.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 88-1009 | 10.40 | 3.30% | 0.0% | 3.3% | 0.0% | 0.00% | 0.05900 | 10.000 | 0.34 | 0.34 | 0.20 | 4.86 | 0.89 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 88-4312 | 8.70 | 6.30% | 0.0% | 6.3% | 0.0% | 0.00% | 0.39851 | 10.000 | 0.55 | 0.55 | 2.18 | 52.42 | 9.57 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 88-4322 | 8.70 | 6.30% | 0.0% | 6.3% | 0.0% | 0.00% | 0.12838 | 10.000 | 0.55 | 0.55 | 0.70 | 16.89 | 3.08 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 88-4332 | 8.70 | 6.30% | 0.0% | 6.3% | 0.0% | 0.00% | 0.18086 | 10.000 | 0.55 | 0.55 | 0.99 | 23.79 | 4.34 | 0.00 | 0.00 | 0.00 | NA | 100% |
| C-111 | 8.30 | 74.00% | 0.0% | 74.0% | 0.0% | 0.00% | 0.01650 | 10.000 | 6.14 | 6.14 | 1.01 | 24.32 | 4.44 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Mobilbond 34 | 9.50 | 18.10% | 0.0% | 18.1% | 0.0% | 0.00% | 0.17187 | 10.000 | 1.72 | 1.72 | 2.96 | 70.93 | 12.94 | 0.00 | 0.00 | 0.00 | NA | 100% |
| ROP 319 | 9.50 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.03258 | 10.000 | 9.50 | 9.50 | 3.10 | 74.28 | 13.56 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 5557/5908 | 7.70 | 46.80% | 0.0% | 46.8% | 0.0% | 0.00% | 0.00161 | 10.000 | 3.60 | 3.60 | 0.06 | 1.39 | 0.25 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 501 LSW | 9.40 | 40.00% | 0.0% | 40.0% | 0.0% | 0.00% | 0.00136 | 10.000 | 3.76 | 3.76 | 0.05 | 1.23 | 0.22 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 551 LSW | 9.60 | 39.30% | 0.0% | 39.3% | 0.0% | 0.00% | 0.01494 | 10.000 | 3.77 | 3.77 | 0.56 | 13.53 | 2.47 | 0.00 | 0.00 | 0.00 | NA | 100% |
| IF-1102 | 10.40 | 1.00% | 0.0% | 1.0% | 0.0% | 0.00% | 0.00082 | 10.000 | 0.10 | 0.10 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Kendall Seal | 7.30 | 46.60% | 0.0% | 46.6% | 0.0% | 0.00% | 1.56755 | 10.000 | 3.40 | 3.40 | 53.32 | 1279.80 | 233.56 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Pronto CA-40 | 8.80 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.00067 | 10.000 | 8.80 | 8.80 | 0.06 | 1.42 | 0.26 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 3792 Jet Melt | 8.10 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.02133 | 10.000 | 8.10 | 8.10 | 1.73 | 41.47 | 7.57 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 8500 | 12.50 | 40.00% | 0.0% | 40.0% | 0.0% | 0.00% | 0.00032 | 10.000 | 5.00 | 5.00 | 0.02 | 0.38 | 0.07 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Vulkem 626 | 9.40 | 15.00% | 0.0% | 15.0% | 0.0% | 0.00% | 0.09454 | 10.000 | 1.41 | 1.41 | 1.33 | 31.99 | 5.84 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Tite-R-Bond | 7.40 | 98.00% | 0.0% | 98.0% | 0.0% | 0.00% | 0.06895 | 10.000 | 7.25 | 7.25 | 5.00 | 120.01 | 21.90 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Oatey Reg ABS | 7.10 | 78.00% | 0.0% | 78.0% | 0.0% | 0.00% | 0.00555 | 10.000 | 5.54 | 5.54 | 0.31 | 7.38 | 1.35 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Canadian ABS | 7.10 | 78.00% | 0.0% | 78.0% | 0.0% | 0.00% | 0.01859 | 10.000 | 5.54 | 5.54 | 1.03 | 24.71 | 4.51 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Oatey Cinr Cir | 6.60 | 95.00% | 0.0% | 95.0% | 0.0% | 0.00% | 0.00053 | 10.000 | 6.27 | 6.27 | 0.03 | 0.80 | 0.15 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Oatey Purple cinr | 6.60 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.00053 | 10.000 | 6.60 | 6.60 | 0.03 | 0.84 | 0.15 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Reg PVC Solvent | 7.50 | 90.00% | 0.0% | 90.0% | 0.0% | 0.00% | 0.00213 | 10.000 | 6.75 | 6.75 | 0.14 | 3.45 | 0.63 | 0.00 | 0.00 | 0.00 | NA | 100% |
| All-Purpose Cement | 7.10 | 72.00% | 0.0% | 72.0% | 0.0% | 0.00% | 0.02089 | 10.000 | 5.11 | 5.11 | 1.07 | 25.63 | 4.68 | 0.00 | 0.00 | 0.00 | NA | 100% |
| P-3011 | 9.00 | 1.00% | 0.0% | 1.0% | 0.0% | 0.00% | 0.71755 | 10.000 | 0.09 | 0.09 | 0.65 | 15.50 | 2.83 | 0.00 | 0.00 | 0.00 | NA | 100% |
| P-3015 #3036 | 8.80 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.05851 | 10.000 | 8.80 | 8.80 | 5.15 | 123.57 | 22.55 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Denat Alcohol | 6.80 | 96.00% | 0.0% | 96.0% | 0.0% | 0.00% | 0.00798 | 10.000 | 6.53 | 6.53 | 0.52 | 12.50 | 2.28 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 676 Adhesive | 5.70 | 82.30% | 0.0% | 82.3% | 0.0% | 0.00% | 1.12887 | 10.000 | 4.69 | 4.69 | 52.96 | 1270.95 | 231.95 | 0.00 | 0.00 | 0.00 | NA | 100% |
| SM 7100 | 12.00 | 3.00% | 0.0% | 3.0% | 0.0% | 0.00% | 0.11029 | 10.000 | 0.36 | 0.36 | 0.40 | 9.53 | 1.74 | 0.00 | 0.00 | 0.00 | NA | 100% |
| SM5522 | 8.80 | 34.50% | 0.0% | 34.5% | 0.0% | 0.00% | 0.01292 | 10.000 | 3.04 | 3.04 | 0.39 | 9.41 | 1.72 | 0.00 | 0.00 | 0.00 | NA | 100% |
| #260/205 Wipe | 7.60 | 88.00% | 0.0% | 88.0% | 0.0% | 0.00% | 0.07979 | 10.000 | 6.69 | 6.69 | 5.34 | 128.07 | 23.37 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Sikaflex 255FC | 9.80 | 3.70% | 0.0% | 3.7% | 0.0% | 0.00% | 0.19075 | 10.000 | 0.36 | 0.36 | 0.69 | 16.60 | 3.03 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Sika Ultra Fast | 10.00 | 2.80% | 0.0% | 2.8% | 0.0% | 0.00% | 0.14759 | 10.000 | 0.28 | 0.28 | 0.41 | 9.92 | 1.81 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Mineral Spirits | 6.60 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.01064 | 10.000 | 6.60 | 6.60 | 0.70 | 16.85 | 3.08 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Isopropanol | 6.50 | 99.00% | 0.0% | 99.0% | 0.0% | 0.00% | 0.01596 | 10.000 | 6.44 | 6.44 | 1.03 | 24.65 | 4.50 | 0.00 | 0.00 | 0.00 | NA | 100% |
| 24030/24040 | 13.00 | 26.00% | 0.0% | 26.0% | 0.0% | 0.00% | 0.01436 | 10.000 | 3.38 | 3.38 | 0.49 | 11.65 | 2.13 | 0.00 | 0.00 | 0.00 | NA | 100% |
| S201060 Adhesive | 20.00 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.00066 | 10.000 | 20.00 | 20.00 | 0.13 | 3.17 | 0.58 | 0.00 | 0.00 | 0.00 | NA | 100% |
| **State Potential Emissions** | | | | **Add worst case coating to all solvents** | | | | | | | **221.94** | **5326.66** | **972.12** | **0.00** | **0.00** | **0.00** | | |

**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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations**
**HAP Emission Calculations-EU7**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Permit Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Toluene | Weight % Hexane | Weight % Methanol | Weight % 1,1,1 trichlorethane | Weight % Xylene | Weight % Dibutylphthalate | Toluene Emissions (ton/yr) | Hexane Emissions (ton/yr) | Methanol Emissions (ton/yr) | 1,1,1 trichlorethane Emissions (ton/yr) | Xylene Emissions (ton/yr) | Dibutylphthalate Emissions (ton/yr) | Combined HAPs (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Silicone Glazing Sealant (all colors) | 8.66 | 0.04200 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vulkum Polyurethane Sealant (616 & 626) | 11.00 | 0.11000 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pemco | 8.83 | 0.07100 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.82 | 0.82 |
| SM 5522 | 8.80 | 0.02700 | 10.000 | 33.10% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.44 |
| Parasil 929 thru 936 | 8.66 | 0.05100 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Butyl Caulk | 10.50 | 0.00400 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Colorimetric Polyethane Sealant | 10.41 | 0.05600 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 3.30% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.84 | 0.00 | 0.84 |
| Colorimetric Silicone (all colors) | 8.66 | 0.18500 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Colorimetric Caulk (gray) | 8.33 | 0.00000 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sikaflex 255-FC & 268-543 | 9.80 | 0.06800 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 6.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 1.75 | 0.00 | 1.75 |
| Parbond Clear | 7.50 | 0.00800 | 10.000 | 55.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.45 |
| Pemco Roof Sealant (all colors) | 7.25 | 0.01700 | 10.000 | 45.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.43 |
| Dicor Roof Sealant | 10.13 | 0.91600 | 10.000 | 46.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 186.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 186.95 |
| Ener 10 | 8.00 | 0.00400 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ener 43 | 10.00 | 0.05809 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 502 LSW | 11.30 | 0.63082 | 10.000 | 20.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 62.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 62.44 |
| CTI-16-36 | 8.50 | 0.70700 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 88-1009 | 10.40 | 0.05900 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 88-4312 | 8.70 | 0.39851 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 88-4322 | 8.70 | 0.12838 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 88-4332 | 8.70 | 0.18086 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| C-111 | 8.30 | 0.01650 | 10.000 | 30.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.80 |
| Mobilbond 34 | 9.50 | 0.17187 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROP 319 | 9.50 | 0.03258 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5557/5908 | 7.70 | 0.00161 | 10.000 | 50.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 |
| 501 LSW | 9.40 | 0.00136 | 10.000 | 40.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 |
| 551 LSW | 9.60 | 0.01494 | 10.000 | 34.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.14 |
| IF-1102 | 10.40 | 0.00082 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Kendall Seal | 7.30 | 1.56755 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pronto CA-40 | 8.80 | 0.00067 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3792 Jet Melt | 8.10 | 0.02133 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8500 | 12.50 | 0.00032 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vulkem 626 | 9.40 | 0.09454 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Tite-R-Bond | 7.40 | 0.06895 | 10.000 | 50.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 11.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.17 |
| Oatey Reg ABS | 7.10 | 0.00555 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Canadian ABS | 7.10 | 0.01859 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oatey Cinr Cir | 6.60 | 0.00053 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oatey Purple cinr | 6.60 | 0.00053 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Reg PVC Solvent | 7.50 | 0.00213 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| All-Purpose Cement | 7.10 | 0.02089 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| P-3011 | 9.00 | 0.71755 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| P-3015 #3036 | 8.80 | 0.05851 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Denat Alcohol | 6.80 | 0.00798 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 676 Adhesive | 5.70 | 1.12887 | 10.000 | 0.00% | 40.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 112.73 | 0.00 | 0.00 | 0.00 | 0.00 | 112.73 |
| SM 7100 | 12.00 | 0.11029 | 10.000 | 3.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.74 |
| SM5522 | 8.80 | 0.01292 | 10.000 | 33.10% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.65 |
| #260/205 Wipe | 7.60 | 0.07979 | 10.000 | 0.00% | 0.00% | 98.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 26.03 | 0.00 | 0.00 | 0.00 | 26.03 |
| Sikaflex 255FC | 9.80 | 0.19075 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 5.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 4.09 | 0.00 | 4.09 |
| Sika Ultra Fast | 10.00 | 0.14759 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 5.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 3.23 | 0.00 | 3.23 |
| Mineral Spirits | 6.60 | 0.01064 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Isopropanol | 6.50 | 0.01596 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24030/24040 | 13.00 | 0.01436 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| S201060 Adhesive | 20.00 | 0.00066 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | | | | **186.95** | **112.7** | **26.0** | **0.0** | **4.1** | **0.8** | **425.2** |

**METHODOLOGY**

Total State Potential Emissions

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

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-EU8**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EU8 RV Pluming-Cleaners and Adhesives** | | | | | | | | | | | | | | | | | | |
| ABS Plastic Pipe Cement | 7.00 | 85.00% | 0.0% | 85.0% | 0.0% | NA | 0.05400 | 10.000 | 5.95 | 5.95 | 3.21 | 77.11 | 14.07 | 0.00 | 0.00 | 0.00 | NA | 100% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | **3.21** | **77.11** | **14.07** | **0.00** | **0.00** | **0.00** | | |
| | | | | | | | | | Control Efficiency 90% | | | | | | | | | |
| METHODOLOGY | | | | | | | | | Controlled PM/PM10/PM2.5 | | | | | **0.00** | **0.00** | **0.00** | | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-EU9**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EU9 Undercoating** | | | | | | | | | | | | | | | | | | |
| Undercoating with Spray Gun (Seal N Sound) | 7.34 | 47.00% | 0.0% | 47.0% | 0.0% | 49.00% | 0.98200 | 10.000 | 3.45 | 3.45 | 33.88 | 813.05 | 148.38 | 41.83 | 41.83 | 41.83 | 7.04 | 75% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | **33.88** | **813.05** | **148.38** | **41.83** | **41.83** | **41.83** | | |
| | | | | | | | | | Control Efficiency 90% | | | | | | | | | |
| METHODOLOGY | | | | | | | | | Controlled PM/PM10/PM2.5 | | | | | **4.18** | **4.18** | **4.18** | | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-EU10**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EU10 RV/RV Parts and Equipment Cleaning** | | | | | | | | | | | | | | | | | | |
| Isopropanol | 6.51 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.04700 | 10.000 | 6.51 | 6.51 | 3.06 | 73.43 | 13.40 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Methylene Chloride | 11.00 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.00100 | 10.000 | 11.00 | 11.00 | 0.11 | 2.64 | 0.48 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Mineral Spirits | 6.58 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.07500 | 10.000 | 6.58 | 6.58 | 4.94 | 118.44 | 21.62 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Denatured Alcohol | 6.78 | 100.00% | 4.0% | 96.0% | 3.26% | 0.00% | 0.00200 | 10.000 | 6.73 | 6.51 | 0.13 | 3.12 | 0.57 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Lacquer Thinner | 8.08 | 100.00% | 56.0% | 44.0% | 68.1% | 0.00% | 0.03000 | 10.000 | 11.16 | 3.56 | 1.07 | 25.60 | 4.67 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Enamel Reducer 3812 | 7.50 | 100.00% | 100.0% | 96.6% | 0.0% | 0.00% | 0.11500 | 10.000 | 7.25 | 7.25 | 8.33 | 199.96 | 36.49 | 0.00 | 0.00 | 0.00 | NA | 100% |
| Glass Cleaner | 8.01 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.00700 | 10.000 | 8.01 | 8.01 | 0.56 | 13.46 | 2.46 | 0.00 | 0.00 | 0.00 | NA | 100% |
| C60 Solvent Degreaser | 8.33 | 96.60% | 0.0% | 96.6% | 0.0% | 3.63% | 0.00400 | 10.000 | 8.05 | 8.05 | 0.32 | 7.72 | 1.41 | 0.00 | 0.00 | 0.00 | 221.67 | 100% |
| Orange 88 Degreaser | 8.30 | 10.00% | 0.0% | 10.0% | 0.0% | 96.04% | 0.02800 | 10.000 | 0.83 | 0.83 | 0.23 | 5.58 | 1.02 | 0.00 | 0.00 | 0.00 | 0.86 | 100% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | **18.75** | **449.96** | **82.12** | **0.00** | **0.00** | **0.00** | | |
| | | | | | | | | | Control Efficiency 90% | | | | | | | | | |
| METHODOLOGY | | | | | | | | | Controlled PM/PM10/PM2.5 | | | | | **0.00** | **0.00** | **0.00** | | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations**
**HAP Emission Calculations-EU8, EU9, EU10**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Permit Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Methylene Chloride | Weight % Glycol Ethers | Weight % Ethyl Benzene | Weight % MIBK | Weight % Phenol | Methylene Chloride Emissions (ton/yr) | Glycol Ethers Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) | MIBK Emissions (ton/yr) | Phenol Emissions (ton/yr) | Total HAPs (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EU8 RV Pluming-Cleaners and Adhesives** | | | | | | | | | | | | | | |
| ABS Plastic Pipe Cement | 7.00 | 0.05400 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | | | | | | | | |
| **EU9 Undercoating** | | | | | | | | | | | | | | |
| Undercoating with Spray Gun (Seal N Sound) | 7.34 | 0.98200 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | | | | | | | | |
| **EU10 RV/RV Parts and Equipment Cleaning** | | | | | | | | | | | | | | |
| Isopropanol | 6.51 | 0.04700 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Methylene Chloride | 11.00 | 0.00100 | 10.000 | 100.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.48 | 0.00 | 0.00 | 0.00 | 0.02 | 0.50 |
| Mineral Spirits | 6.58 | 0.07500 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Denatured Alcohol | 6.78 | 0.00200 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Lacquer Thinner | 8.08 | 0.03000 | 10.000 | 20.00% | 6.00% | 0.00% | 0.00% | 0.00% | 2.12 | 0.64 | 0.00 | 0.00 | 0.56 | 3.32 |
| Enamel Reducer 3812 | 7.50 | 0.11500 | 10.000 | 51.00% | 5.00% | 0.00% | 0.00% | 0.00% | 19.27 | 1.89 | 0.00 | 0.00 | 49.49 | 70.65 |
| Glass Cleaner | 8.01 | 0.00700 | 10.000 | 0.00% | 5.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.12 |
| C60 Solvent Degreaser | 8.33 | 0.00400 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Orange 88 Degreaser | 8.30 | 0.02800 | 10.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | | **"Worst Case" Individual HAP** | **21.87** | **2.65** | **0.00** | **0.00** | **50.07** | **74.59** |

**METHODOLOGY**

Total State Potential Emissions

**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

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-EU12**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EU12 RV Coating-Frame Painting (Primer)** | | | | | | | | | | | | | | | | | | |
| Gray Water Reducible Enamel | 10.35 | 56.19% | 42.4% | 13.8% | 49.7% | 28.80% | 0.32200 | 10.000 | 2.84 | 1.43 | 4.61 | 110.54 | 20.17 | 15.99 | 15.99 | 15.99 | 4.97 | 75% |
| | | | | | | | | | | | | | | | | | | |
| **EU12 RV Coating-Frame Painting** | | | | | | | | | | | | | | | | | | |
| Black Water Reducible Enamel | 8.50 | 72.89% | 56.4% | 16.5% | 57.6% | 21.00% | 0.99300 | 10.000 | 3.31 | 1.40 | 13.93 | 334.24 | 61.00 | 25.06 | 25.06 | 25.06 | 6.68 | 75% |
| Automotive Paint | 10.83 | 48.00% | 0.0% | 48.0% | 0.0% | 40.00% | 0.21300 | 10.000 | 5.20 | 5.20 | 11.07 | 265.74 | 48.50 | 13.13 | 13.13 | 13.13 | 13.00 | 75% |
| | | | | | | | | | | | | | | | | | | |
| **EU12 RV Coating-Enamel** | | | | | | | | | | | | | | | | | | |
| Gloss Black Paint | 6.08 | 90.00% | 20.0% | 70.0% | 18.3% | NA | 0.11900 | 10.000 | 5.21 | 4.26 | 5.06 | 121.55 | 22.18 | 1.58 | 1.58 | 1.58 | NA | 50% |
| | | | | | | | | | | | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **State Potential Emissions** | **Add worst case coating to all solvents** | | **34.67** | **832.08** | **151.85** | **55.76** | **55.76** | **55.76** |
| | | Control Efficiency 90% | | | | | | |
| METHODOLOGY | | Controlled PM/PM10/PM2.5 | | | | **5.58** | **5.58** | **5.58** |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-EU14**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EU14 Paint Thinner/Reducers** | | | | | | | | | | | | | | | | | | |
| Lacquer Thinner | 6.99 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.01400 | 10.000 | 6.99 | 6.99 | 0.98 | 23.49 | 4.29 | 0.00 | 0.00 | 0.00 | NA | 75% |
| Primer Reducer | 8.00 | 89.00% | 0.0% | 89.0% | 0.0% | 50.00% | 0.08500 | 10.000 | 7.12 | 7.12 | 6.05 | 145.25 | 26.51 | 0.82 | 0.82 | 0.82 | 14.24 | 75% |
| Gun Cleaner | 9.51 | 95.00% | 0.0% | 95.0% | 0.0% | 5.00% | 0.00300 | 10.000 | 9.03 | 9.03 | 0.27 | 6.50 | 1.19 | 0.02 | 0.02 | 0.02 | 180.69 | 75% |
| Toluene | 7.26 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.02100 | 10.000 | 7.26 | 7.26 | 1.52 | 36.59 | 6.68 | 0.00 | 0.00 | 0.00 | NA | 75% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **State Potential Emissions** | **Add worst case coating to all solvents** | | **8.83** | **211.83** | **38.66** | **0.83** | **0.83** | **0.83** | |
| | | Control Efficiency 90% | | | | | | | |
| METHODOLOGY | | Controlled PM/PM10/PM2.5 | | | | **0.083** | **0.083** | **0.083** | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-220-01**

**Company Name:** **Forest River, Inc. Coachmen Division**
**Address City IN Zip:** **423 N. Main Street, Middlebury, IN 46540**
**Permit Number:** **039-30817-00062**
**Reviewer:** **Teresa Freeman**
**Date:** **November 28, 2011**

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Plant No. 220** | | | | | | | | | | | | | | | | | | |
| WR HAPs free | 9.80 | 28.00% | 0.0% | 28.0% | 0.0% | 72.00% | 1.00000 | 1.000 | 2.74 | 2.74 | 2.74 | 65.86 | 12.02 | 7.73 | 7.73 | 7.73 | NA | 75% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **State Potential Emissions** | **Add worst case coating to all solvents** | | **2.74** | **65.86** | **12.02** | **7.73** | **7.73** | **7.73** | |
| | | Control Efficiency 90% | | | | | | | |
| METHODOLOGY | | Controlled PM/PM10/PM2.5 | | | | **0.77** | **0.77** | **0.77** | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations**
**VOC and Particulate**
**From Surface Coating Operations-EU 250**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | 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 | PM Potential (ton/yr) | PM10 Potential (ton/yr) | PM2.5 Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Plant 250 Touch Up Booth** | | | | | | | | | | | | | | | | | | |
| Base Coat | 7.50 | 78.87% | 0.0% | 78.9% | 0.0% | 12.50% | 0.25000 | 0.750 | 5.92 | 5.92 | 1.11 | 26.62 | 4.86 | 0.33 | 0.33 | 0.33 | 47.32 | 75% |
| Flex Seal Sealer | 9.30 | 26.05% | 0.0% | 26.1% | 0.0% | 49.10% | 0.12500 | 0.750 | 2.42 | 2.42 | 0.23 | 5.45 | 0.99 | 0.71 | 0.71 | 0.71 | 4.93 | 75% |
| Glamour Clear Coat | 8.10 | 50.00% | 0.0% | 50.0% | 0.0% | 49.80% | 0.12500 | 0.750 | 4.05 | 4.05 | 0.38 | 9.11 | 1.66 | 0.42 | 0.42 | 0.42 | 8.13 | 75% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | **1.72** | **41.18** | **7.52** | **1.45** | **1.45** | **1.45** | | |
| | | | | | | | | | Control Efficiency 90% | | | | | | | | | |
| METHODOLOGY | | | | | | | | | Controlled PM/PM10/PM2.5 | | | | | **0.14** | **0.14** | **0.14** | | |

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/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

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| Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Methyl Metha.crylate | Weight % Cumene | Weight % Ethyl Benzene | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Methyl Methacrylate Emissions (ton/yr) | Cumene Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Plant 250 Touch Up Booth** | | | | | | | | | | | | | |
| Base Coat | 7.51 | 0.250000 | 0.75 | 16.00% | 30.00% | 1.00% | 1.00% | 3.00% | 0.99 | 1.85 | 0.06 | 0.06 | 0.19 |
| Flex Seal Sealer | 9.33 | 0.125000 | 0.75 | 5.00% | 7.00% | 0.00% | 1.00% | 1.00% | 0.19 | 0.27 | 0.00 | 0.04 | 0.04 |
| Glamour Clear Coat | 8.12 | 0.125000 | 0.75 | 1.00% | 0.00% | 0.00% | 1.00% | 1.00% | 0.03 | 0.00 | 0.00 | 0.03 | 0.03 |
| Total State Potential Emissions | | | | | | | | | **1.21** | **2.12** | **0.06** | **0.13** | **0.26** |

**METHODOLOGY**

| | |
|---|---|
| Worst Single HAP | **2.12** |
| Combined HAPs | **3.78** |

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

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**

**Company Name:** **Forest River, Inc. Coachmen Division**
**Address City IN Zip:** **423 N. Main Street, Middlebury, IN 46540**
**Permit Number:** **039-30817-00062**
**Reviewer:** **Teresa Freeman**
**Date:** **November 28, 2011**

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 94.7 | 813 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 7.6 | 0.6 | 100.0<br>**see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.77 | 3.09 | 3.09 | 0.24 | 40.65 | 2.24 | 34.14 |

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is filterable and condensable particulate combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**HAPs Emissions**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| | HAPs - Organics | | | | |
|---|---|---|---|---|---|
| | Benzene | Dichlorobenzene | Formaldehyde | Hexane | Toluene |
| Emission Factor in lb/MMcf | 2.1E-03 | 1.2E-03 | 7.5E-02 | 1.8E+00 | 3.4E-03 |
| Potential Emission in tons/yr | 8.536E-04 | 4.878E-04 | 3.048E-02 | 7.316E-01 | 1.382E-03 |

| | HAPs - Metals | | | | | |
|---|---|---|---|---|---|---|
| | Lead | Cadmium | Chromium | Manganese | Nickel | |
| Emission Factor in lb/MMcf | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 | |
| Potential Emission in tons/yr | 2.032E-04 | 4.471E-04 | 5.690E-04 | 1.545E-04 | 8.536E-04 | Total HAPS 7.671E-01 |

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 3 for Greenhouse Gas calculations.

updated 12/10

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**Greenhouse Gas Emissions**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| | Greenhouse Gas | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/MMcf | 120000 | 2.3 | 2.2 |
| Potential Emission in tons/yr | 48775.7 | 0.93 | 0.89 |
| Summed Potential Emissions in tons/yr | 48777.5 | | |
| CO2e Total in tons/yr | 49072.5 | | |

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

updated 12/10

**Appendix A: Emissions Calculations**
**Woodworking Operations-Plants 4, 7. 110. 201, 205, 210, 220 & 310**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| Unit ID/Control Device | Baghouse ID | Control Efficiency (%) | Actual Quantity of Dust Collected (lbs/wk) | Maximum Quantitiy of Dust Collected (lb/hr) | PM, PM10, PM2.5 Emissions before Controls (tons/yr) | PM, PM10, PM2.5 Emissions after Controls (tons/yr) |
|---|---|---|---|---|---|---|
| Wood Working Dust Collector | EU16 | 95.00% | 25.6 | 0.64 | 2.95 | 0.15 |
| **Total PTE** | | | | | **2.95** | **0.15** |

**Notes**

Baghouse control efficiency values are conservately estimated.

Actual Quantities of Dust Collected is based upon actual values measured by the facility.

Methodoloy

Maximum Quantity of Dust Generated (lbs/hr)= Actual Quantity of Dust Collected (lbs/wk) X (1 wk/5 days) X (1 day/8 hours) X (2000 hrs/yr) X 1 yr/8760 hrs)

PTE Before Controls (tons/yr)= Maximum Quantity of Dust Collected (lbs/hr) X (8760 hrs/yr) X (1 ton/2000 lbs) X 1/Control efficiency %)

PTE After Controls (tons/yr)= PTE Before Controls (tons/yr) X (1- Control Efficiency %)

**Appendix A: Emissions Calculations**
**Welding and Thermal Cutting**

**Company Name:** Forest River, Inc. Coachmen Division
**Address City IN Zip:** 423 N. Main Street, Middlebury, IN 46540
**Permit Number:** 039-30817-00062
**Reviewer:** Teresa Freeman
**Date:** November 28, 2011

| PROCESS | Number of Stations | Max. electrode consumption per station | EMISSION FACTORS * (lb pollutant / lb electrode) | | | | | | EMISSIONS (lb/hr) | | | | | | TOTAL HAPS (lb/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WELDING | | (lbs/hr) | PM | PM10 | PM2.5 | Mn | Ni | Cr | PM | PM10 | PM2.5 | Mn | Ni | Cr | |
| Steel Metal Inert Gas (MIG) | 24 | 0.35 | 0.0055 | 0.0055 | 0.0055 | 0.0003 | 0.0000 | 0.0000 | 0.0462 | 0.0462 | 0.0462 | 0.0025 | 0.0000 | 0.0000 | 0.003 |
| Aluminum Metal Inert Gas (MIG) | 17 | 0.13 | 0.0107 | 0.0107 | 0.0107 | 0.0000 | 0.0000 | 0.0000 | 0.0236 | 0.0236 | 0.0236 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| EMISSION TOTALS | | | | | | | | | PM | PM10 | PM2.5 | Mn | Ni | Cr | Total HAPs |
| | | | | | | | | | | | | | | | |
| Potential Emissions lbs/hr | | | | | | | | | 0.07 | 0.07 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| Potential Emissions lbs/day | | | | | | | | | 1.68 | 1.68 | 1.68 | 0.06 | 0.00 | 0.00 | 0.06 |
| Potential Emissions tons/year | | | | | | | | | **0.31** | **0.31** | **0.31** | 0.01 | 0.00 | 0.00 | 0.01 |

METHODOLGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.

Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).

Welding and other flame cutting emission factors are from an internal training session document.

See AP-42, Chapter 12.19 for additional emission factors for welding.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*
**Governor**

*Thomas W. Easterly*
**Commissioner**

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


**SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

TO: William G. Conway, Jr.
River Forest, Inc., Coachmen Division
PO Box 3030
Elkhart, IN 46514

DATE: August 20, 2012

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

SUBJECT: Final Decision
Part 70 Operating Permit Renewal
039-30817-00062

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:
Bill MacDonald, Consultant
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
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Toll Free (800) 451-6027
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August 20, 2012

TO: Middlebury Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Forest River, Inc., Coachmen Division**
**Permit Number: 039-30817-00062**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

# Mail Code 61-53

| IDEM Staff | PWAY 8/20/2012<br>Forest River, Inc Coachmen Division 039-30817-00062 (final) | | | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |
|---|---|---|---|---|
| Name and address of Sender | ▶ | Indiana Department of Environmental Management<br>Office of Air Quality – Permits Branch<br>100 N. Senate<br>Indianapolis, IN 46204 | Type of Mail:<br>**CERTIFICATE OF MAILING ONLY** | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | William G Conway Jr Forest River, Inc Coachmen Division PO Box 3030 Elkhart IN 46514 (Source CAATS) | | | | | | | | | |
| 2 | | Elkhart County Health Department Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 *(Health Department)* | | | | | | | | | |
| 3 | | Middlebury Town Council and Town Manager P.O. Box 812, 418 North Main Street Middlebury IN 46540 *(Local Official)* | | | | | | | | | |
| 4 | | Middlebury Public Library 101 East Winslow, P.O. Box 192 Middlebury IN 46540-0192 *(Library)* | | | | | | | | | |
| 5 | | Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 *(Local Official)* | | | | | | | | | |
| 6 | | Mr. Bill MacDonald DECA Environmental & Associates, Inc. 410 1st Avenue NE Carmel IN 46032 *(Consultant)* | | | | | | | | | |
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