**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: February 3, 2012

RE: Therma Tru Corporation / 033-30711-00019

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

## Therma Tru Corporation
## 601 RE Jones Road
## Butler, Indiana 46721

(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.: T033-30711-00019 | |
|---|---|
| Issued by:<br><br>Chrystal A. Wagner, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: February 3, 2012<br><br>Expiration Date: February 3, 2017 |

TABLE OF CONTENTS

**A. SOURCE SUMMARY**

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

**B. GENERAL CONDITIONS**

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B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]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

**C. SOURCE OPERATION CONDITIONS**

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

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

**Testing Requirements [326 IAC 2-7-6(1)]**
C.8 Performance Testing [326 IAC 3-6]

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

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

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

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**
C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)] [326 IAC 2-6]
C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

**Stratospheric Ozone Protection**
C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

**D.1 FACILITY OPERATION CONDITIONS:** Door Assembly

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**
D.1.1 PSD Minor Limit for Volatile Organic Compounds (VOC) [326 IAC 2-2]
D.1.2 PSD Minor Limit for Particulate Matter [326 IAC 2-2]
D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
D.1.4 Volatile Organic Compound (VOC) [326 IAC 8-2-9]
D.1.5 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]
D.1.6 Particulate [326 IAC 6-3-2(d)]
D.1.7 Particulate [326 IAC 6-3-2]

**Compliance Determination Requirements**
D.1.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]
D.1.9 Particulate Matter (PM/PM10) Emission Determination [326 IAC 2-2]
D.1.10 Particulate Control [326 IAC 2-7-6(6)]
D.1.11 Testing Requirements [326 IAC 2-1.1-11]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**
D.1.12 Monitoring [40 CFR 64]
D.1.13 Monitoring
D.1.14 Visible Emissions Notations
D.1.15 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)][40 CFR 64]
D.1.16 Broken or Failed Bag Detection
D.1.17 Cyclone Failure Detection

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**
D.1.18 Record Keeping Requirements
D.1.19 Reporting Requirements

**D.2 FACILITY OPERATION CONDITIONS:** SMC Operations subject to NESHAP WWWW

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**
D.2.1 Particulate Matter (PM) [326 IAC 6-3]
D.2.2 PSD Minor Limit [326 IAC 2-2]

**Compliance Determination Requirements**
D.2.3 Particulate Control [326 IAC 2-7-6(6)]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**
D.2.4 Visible Emissions Notations
D.2.5 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.2.6 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**
D.2.7 Record Keeping Requirements

**D.3 FACILITY OPERATION CONDITION:** Insignificant Activities

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**
D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]
D.3.3 Particulate [326 IAC 6-3-2]
D.3.4 PSD Minor Limit [326 IAC 2-2]

**Compliance Determination Requirements**
D.3.5 Particulate Control [326 IAC 2-7-6(6)]

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

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

**D.4 FACILITY OPERATION CONDITION:** Deflashing Station

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**
D.4.1 Particulate [326 IAC 6-3-2]
D.4.2 Minor Source Modification (PM and PM10) [326 IAC 2-7-10.5(d)(4)(C)]
D.4.3 PSD Minor [326 IAC 2-2]

**Compliance Determination Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**
D.4.4 Particulate Control [326 IAC 2-7-6(6)]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**
D.4.5 Visible Emissions Notations
D.4.6 Dust Collector Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.4.7 Broken or Failed Cartridge Detection

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**
D.4.8 Record Keeping Requirements

**D.5 Source-Wide VOC Emissions Limit**

**Emission Limitations and Standards [326 IAC 2-7-5(1)] [326 IAC 2-2]**
D.5.1 PSD Minor Limit [326 IAC 2-2]

**Compliance Determination Requirements**
D.5.2 Volatile Organic Compounds (VOC)
D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**
D.5.4 Record Keeping Requirements
D.5.5 Reporting Requirements

**E.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(1)] [40 CFR 63, Subpart MMMM]**

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]
E.1.2 Miscellaneous Metal Part and Products Surface Coating Requirements [40 CFR Part 63, Subpart MMMM]
E.1.3 One-Time Deadlines Relating to Miscellaneous Metal Part and Products Surface Coating Notifications [40 CFR Part 63, Subpart MMMM]

**E.2 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(1)] [40 CFR 63, Subpart PPPP]**

E.2.1 General Provisions Relating to NESHAP PPPP [326 IAC 20-1] [40 CFR Part 63, Subpart A]
E.2.2 Coating of Plastic Parts and Products NESHAP [40 CFR Part 63, Subpart PPPP]
E.2.3 One-Time Deadlines Relating to Coating of Plastic Parts and Products NESHAP [40 CFR Part 63, Subpart PPPP]

**E.3 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(1)] [40 CFR 63, Subpart WWWW]**

E.3.1 General Provisions Relating to NESHAP WWWW [326 IAC 20-1] [40 CFR Part 63, Subpart A]
E.3.2 Reinforced Plastic Composites Production NESHAP [40 CFR Part 63, Subpart WWWW]

**E.4 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES [40 CFR 63, SUBPART ZZZZ] [326 IAC 2-7-5(1)] AND NEW SOURCE PERFORMANCE STANDARDS (NSPS) FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES [40 CFR 60, SUBPART IIII] [326 IAC 2-7-5(1)]**

E.4.1 New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines [40 CFR 63, Subpart ZZZZ][326 IAC 20-1]
E.4.2 General Provisions Relating to NSPS [40 CFR 60, Subpart A][326 IAC 12-1]
E.4.3 New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart IIII][326 IAC 12]

**Certification**
**Emergency Occurrence Report**
**Part 70 Quarterly Reports**
**Quarterly Deviation and Compliance Monitoring Report**
**Attachment A - NESHAP, Subpart WWWW**
**Attachment B - NESHAP, Subpart MMMM**

**Attachment C - NESHAP, Subpart PPPP**
**Attachment D - NESHAP, Subpart ZZZZ**
**Attachment E - NSPS, Subpart IIII**

## 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(15)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary metal and fiberglass entry door manufacturing source.

| | |
|---|---|
| Source Address: | 601 RE Jones Road, Butler, Indiana 46721 |
| General Source Phone Number: | 260 - 868 - 5811 |
| SIC Code: | 3089 and 3442 |
| County Location: | DeKalb |
| 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(15)]

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

(a) One (1) steel door assembly line, identified as A-Line, consisting of the following operations, approved for construction in 2009:

(1) One (1) enclosed spray coating operation, identified as SP-2, using airless spray application method, with a maximum capacity of 360 steel doors per hour with 0.14 gallons per steel door coating usage rate, using dry filters for particulate control, and exhausting to stack SP-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(2) One (1) adhesive coating operation, identified as SA-2, with a maximum capacity of 360 steel doors per hour with 0.20 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SA-2.1.Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(3) One (1) spray coating curing oven, identified as SCO-2, with a maximum heat input capacity of 2.0 MMBtu/hr, using only natural gas and electric power, with no add-on control, and exhausting to a stack.

(4) One (1) foaming operation, identified as SF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SF-2.1.

(5) One (1) boring operation, identified as SDMC-2A, with maximum throughput capacity of 16,200 pounds per hour, using a cyclone for particulate control, and exhausting to stack SDMC-2.1.

(6) One (1) end rail boring operation, identified as SDMC-2B, with maximum throughput capacity of 16,200 pounds per hour, using a cyclone for particulate control, and exhausting to stack SDMC-2.1.

(7) One (1) machining station, identified as EU4, installed in 1989, using a cyclone for particulate emission control and exhausting to Stack SDMC-2.1, capacity: 360 doors per hour and 16,200 pounds per hour, consisting of the following:

(A) One (1) deflashing station, identified as DF-3, approved for construction in 2010, with a maximum throughput capacity of 13,680 pounds per hour, equipped with a cartridge dust collector for particulate control, exhausting to stack SDMC-2.1.

(b) One (1) Door Assembly Line, identified as B-Line, installed in 2000, capacity: 20,250 pounds of doors per hour or 360 doors per hour, consisting of:

(1) One (1) adhesive application station, identified as D2-APP1, without add-on control, exhausting through Stack 18.2, capacity: 43 pounds of adhesive per hour or 360 doors per hour. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(2) One (1) natural gas fired curing oven, identified as D2-OV2, exhausting through exhausting inside the building, maximum heat input capacity of 0.25 MMBtu/hr, and capacity: 360 doors per hour.

(3) One (1) door foam injection system, identified as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 360 doors per hour.

(4) One (1) door machining station, identified as D2-MS1, including an online boring center (D2-MS1-1), equipped with a baghouse and cyclone connected in series, identified as DC2, exhausting through Stack 20.1, capacity: 360 doors per hour or 18,000 pounds per hour.

(5) One (1) deflashing station, identified as DF-1, approved for installation in 2006, equipped with a cartridge dust collector for particulate control, exhausted inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(c) One (1) fiberglass door assembly line, identified as C-Line, consisting of the following operations, approved for construction in 2009:

(1) One (1) adhesive coating operation, identified as FA-2, with a maximum capacity of 360 steel doors per hour with 0.03 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SVFA-2. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered plastic parts and products surface coating facility.

(2) One (1) foaming operation, identified as FF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SVFF-2.

(3) One (1) curing oven/flame treater, identified as FCO-2, with a maximum heat input capacity of 0.25 MMBtu/hr, using natural gas only, with no add-on control, and exhausting to a stack.

(4) One (1) machining operation, identified as FDMC-2A, with maximum throughput capacity of 18,200 pounds per hour, using a baghouse for particulate control, and exhausting to stack DC1-1.

(5) One (1) online boring center, identified as FDMC-2B, with maximum throughput capacity of 18,200 pounds per hour, using a baghouse for particulate control, and exhausting to stack DC1-1.

(6) One (1) deflashing station, identified as DF-2, installed in 2009, equipped with a cartridge dust collector for particulate control, exhausting inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(d) One (1) conveyorized coating line, identified as BPO2, consisting of the following operations, approved in 2011 for construction:

(1) Six (6) coating booths, identified as booths 1 through 6, using airless spray application method, with a maximum capacity of 60 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-1 through SBPO2-6.

(2) Three (3) manual booths, identified as booths 7 through 9, using airless spray application method, with a maximum capacity of 14 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-7 through SBPO2-9.

(e) Machining centers connected to dust collector DC3 and exhausting to stack DC3-1, as follows:

(1) Two (2) CNC Thermwood machining centers for Patio Doors, identified as PA-1, installed in 2006, capacity: 11.25 patio door units per hour, each.

(2) Three (3) KVAL cutout machines, identified as CO-1, CO-2 and CO-3, installed in 1993, 2005 and 2000, respectively, capacity: 50 units per hour, each.

(3) One (1) Door Hinger, identified as DH-1, installed prior to 1991, capacity: 15.63 doors per hour.

(f) One (1) double cut saw, identified as DCS-1, installed in 2004, using a baghouse for particulate control, exhausting to a stack DCS-2.1, capacity: 130 door skins per hour.

(g) One (1) spray booth coating operation, approved for construction in 2007 and modified in 2010, identified as TLI Coating Line, and consisting of:

(1) One (1) automatic line with five (5) paint booths, two (2) electric powered infrared drying banks, and five (5) electric flash stations, individually identified as Booth 1 through Booth 5, IR Drying Banks 1 and 2, and Flash 1 through Flash 5, collectively identified as TLI Automatic Line, with a maximum capacity of 60 doors per hour or 50 patio units per hour, using dry filters as control, and exhausting to stacks TLI-1 through TLI-5, respectively. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered a miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(2) Two (2) manual paint booths, identified as TLI Manual Booths (booths 6 and 7), with a combined maximum capacity of 14 units per hour, and using dry filters as control and exhausting to stacks TLI-6 and TLI-7. Under 40 CFR 63 (NESHAP),

Subpart MMMM, these units are considered miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(3) One (1) paint kitchen for mixing, handling, and storing paint. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(4) One (1) spray booth, identified as TLI booth 8, approved for construction in 2010, with a maximum capacity of seven (7) units per hour, and using dry filters for particulate control and exhausting to stack TLI-8. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(5) One (1) cutout machine, identified as TLI cutout, modified in 2010, with a maximum throughput capacity of 1,375 pounds per hour, using cyclone TLI DC-1 for particulate control.

(h) One (1) concrete door adhesive spraying operation, approved for construction in 2007, identified as CD-3, with a maximum capacity of 24 doors per hour, using dry filters as control, and exhausting to Stack CD3-1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(i) One (1) Sheet Molding Compound (SMC) Production Line, identified as SMC2, installed in 2000, capacity: 18,500 pounds of molding compound per hour, consisting of:

(1) Two (2) calcium carbonate silos, identified as SILO1 and SILO2, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 8,800 pounds of calcium carbonate per hour, each, capacity: 200,000 pounds of calcium carbonate, each.

(2) Two (2) resin mixers, exhausting through Stack 17.1 and/or Stack 17.2, total throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(3) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(j) Six (6) sheet molding compound (SMC) presses, identified as Presses 1 through 6, installed in 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(k) One (1) sheet molding compound (SMC) press, identified as Press 7, installed in February 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(l) One (1) sheet molding compound (SMC) press, identified as Press 8, installed in August 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(m) One (1) sheet molding compound (SMC) press, identified as Press 9, installed in March 1999, exhausting inside, capacity: 862.5 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(n) Four (4) sheet molding compound (SMC) presses, identified as Presses 11 through 14, installed in 2000, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(o) One (1) sheet molding compound (SMC) press, identified as Press 15, installed in March 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(p) One (1) sheet molding compound (SMC) press, identified as Press 16, installed in May 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(q) One (1) sheet molding compound (SMC) press, identified as Press 17, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(r) One (1) sheet molding compound (SMC) press, identified as Press 18, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(s) One (1) sheet molding compound (SMC) press, identified as Press 19, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(t) One (1) sheet molding compound (SMC) press, identified as Press 20, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(u) Five (5) sheet molding compound (SMC) presses, identified as Presses 21 through 25, installed in 2005, exhausting inside, capacity: 1,067 pounds of SMC per hour each and a combined total of 4,826 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(v) One (1) cutout machine, identified as CO-4, approved for construction in 2009, with a maximum throughput capacity of 2,450 pounds per hour, using a baghouse for particulate control, and exhausting to stack SDMC-2.1.

(w) One (1) double cut saw, identified as DCS-2, approved for construction in 2009, with a maximum throughput capacity of 2,470 pounds per hour, using a baghouse for particulate control, and exhausting to stack DCS-2.1.

(x) One (1) dry additive mixer, identified as SMCDM-1, approved for construction in 2009, with a maximum throughput capacity of 33 pounds per hour, using a baghouse for particulate control, and exhausting to stack SMCDM-1.1.

(y) One (1) miscellaneous sawing/trimming operation, identified as MS-2, approved for construction in 2009, with a maximum throughput capacity of 2,470 pounds per hour, using a baghouse for particulate control, and exhausting to stack DCS-2.1.

(z) One (1) cold cleaning/degreasing operation, identified as CC-2, approved for construction in 2009, with a maximum solvent usage capacity of 1 gallon per day, and venting inside the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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

(a) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(b) Grinding and machining operations controlled with sock filter, fabric filters, and a cyclone (TLI DC-1) with a design grain loading of less than or equal to 0.03 grains per actual cubic feet and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking. [326 IAC 6-3-2]

(c) Four (4) five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(d) Three (3) five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(e) Six (6) above ground resin storage tanks, identified as Tanks 1 through 6, exhausting through stack 17.1 and/or stack 17.2 capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than three (3) pounds per hour and fifteen (15) pounds per day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(f) Five (5) resin holding tanks consisting of two (2) tanks, identified as A Side-Tank 1 and A Side-Tank 2 capacity: 1,500 gallons of resin each, and three (3) tanks, identified B Side-1 through B Side-3, capacity: 80 gallons of resin, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(g) One (1) 6,300-gallon tank storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(h) Activities with particulate emissions less than 5 lbs/hour or 25 lbs/day:

(1) Three (3) fiberglass skin cut down saws (FS-1, FS-2 and FS-3) [326 IAC 6-3-2].

(2) One (1) sanding booth (FS-4) [326 IAC 6-3-2].

(i) One (1) twelve thousand (12,000) -gallon aboveground storage tank, identified as T001, storing cyclopentane, covered by a nitrogen cap and pressurized to approximately thirty-five (35) psi. Under 40 CFR 68, Chemical Accident Prevention Provisions, this tank is used for storage of a flammable substance over 10,000 lbs, and requires a Risk Management Plan (RMP).

(j) One (1) diesel fuel-fired reciprocating emergency generator, identified as EG-1 rated at fifty (50) kW (~67 HP), (ordered in October 2010), and approved in 2010 for construction. The diesel generator, identified as EG-1, is considered an affected facility under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and a new stationary reciprocating internal combustion engine at an area source of hazardous air pollutants under NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CRF 63, Subpart ZZZZ).

(k) One (1) diesel fuel-fired compression ignition emergency generator for fire suppression system, identified as EG-2 rated at fifty (350) kilowatt (kW) (~469.2 HP), in stalled in 2005. EG-2, is considered an existing affected facility under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and an existing stationary reciprocating internal combustion engine at an area source of hazardous air pollutants under NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CRF 63, Subpart ZZZZ).

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

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

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

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

## SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T033-30711-00019, 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 July 1 of each year to:

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)][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)(9) 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 T033-30711-00019 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),(c), or (e) 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),(c), or (e). 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), (c)(1), and (e)(2).

(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)]

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.

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

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.15 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.16 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.17 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. 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.18 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. 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.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:** Door Assembly

(a) One (1) steel door assembly line, identified as A-Line, consisting of the following operations, approved for construction in 2009:

(1) One (1) enclosed spray coating operation, identified as SP-2, using airless spray application method, with a maximum capacity of 360 steel doors per hour with 0.14 gallons per steel door coating usage rate, using dry filters for particulate control, and exhausting to stack SP-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(2) One (1) adhesive coating operation, identified as SA-2, with a maximum capacity of 360 steel doors per hour with 0.20 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SA-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(3) One (1) spray coating curing oven, identified as SCO-2, with a maximum heat input capacity of 2.0 MMBtu/hr, using only natural gas and electric power, with no add-on control, and exhausting to a stack.

(4) One (1) foaming operation, identified as SF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SF-2.1.

(5) One (1) boring operation, identified as SDMC-2A, with maximum throughput capacity of 16,200 pounds per hour, using a cyclone for particulate control, and exhausting to stack SDMC-2.1.

(6) One (1) end rail boring operation, identified as SDMC-2B, with maximum throughput capacity of 16,200 pounds per hour, using a cyclone for particulate control, and exhausting to stack SDMC-2.1.

(7) One (1) machining station, identified as EU4, installed in 1989, using a cyclone for particulate emission control and exhausting to Stack SDMC-2.1, capacity: 360 doors per hour and 16,200 pounds per hour, consisting of the following:

(A) One (1) deflashing station, identified as DF-3, approved for construction in 2010, with a maximum throughput capacity of 13,680 pounds per hour, equipped with a cartridge dust collector for particulate control, exhausting to stack SDMC-2.1.

(b) One (1) Door Assembly Line, identified as B-Line, installed in 2000, capacity: 20,250 pounds of doors per hour or 360 doors per hour, consisting of:

(1) One (1) adhesive application station, identified as D2-APP1, without add-on control, exhausting through Stack 18.2, capacity: 43 pounds of adhesive per hour or 360 doors per hour. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(2) One (1) natural gas fired curing oven, identified as D2-OV2, exhausting through exhausting inside the building, maximum heat input capacity of 0.25 mmBtu/hr, and capacity: 360 doors per hour.

(3) One (1) door foam injection system, identified as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 360 doors per hour.

(4) One (1) door machining station, identified as D2-MS1, including an online boring center (D2-MS1-1), equipped with a baghouse and cyclone connected in series, identified as DC2, exhausting through Stack 20.1, capacity: 360 doors per hour or 18,000 pounds per hour.

(5) One (1) deflashing station, identified as DF-1, approved for installation in 2006, equipped with a cartridge dust collector for particulate control, exhausted inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(c) One (1) fiberglass door assembly line, identified as C-Line, consisting of the following operations, approved for construction in 2009:

(1) One (1) adhesive coating operation, identified as FA-2, with a maximum capacity of 360 steel doors per hour with 0.03 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SVFA-2. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(2) One (1) foaming operation, identified as FF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SVFF-2.

(3) One (1) curing oven/flame treater, identified as FCO-2, with a maximum heat input capacity of 0.25 MMBtu/hr, using natural gas only, with no add-on control, and exhausting to a stack.

(4) One (1) machining operation, identified as FDMC-2A, with maximum throughput capacity of 18,200 pounds per hour, using a baghouse for particulate control, and exhausting to stack DC1-1.

(5) One (1) online boring center, identified as FDMC-2B, with maximum throughput capacity of 18,200 pounds per hour, using a baghouse for particulate control, and exhausting to stack DC1-1.

(6) One (1) deflashing station, identified as DF-2, installed in 2009, equipped with a cartridge dust collector for particulate control, exhausting inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(d) One (1) conveyorized coating line, identified as BPO2, consisting of the following operations, approved in 2011 for construction:

(1) Six (6) coating booths, identified as booths 1 through 6, using airless spray application method, with a maximum capacity of 60 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-1 through SBPO2-6.

(2) Three (3) manual booths, identified as booths 7 through 9, using airless spray application method, with a maximum capacity of 14 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-7 through SBPO2-9.

(e) Machining centers connected to dust collector DC3 and exhausting to stack DC3-1, as follows:

(1) Two (2) CNC Thermwood machining centers for Patio Doors, identified as PA-1, installed in 2006, capacity: 11.25 patio door units per hour, each.

(2) Three (3) KVAL cutout machines, identified as CO-1, CO-2 and CO-3, installed in 1993, 2005 and 2000, respectively, capacity: 50 units per hour, each.

(3) One (1) Door Hinger, identified as DH-1, installed prior to 1991, capacity: 15.63 doors per hour.

(f) One (1) double cut saw, identified as DCS-1, installed in 2004, using a baghouse for particulate control, exhausting to a stack DCS-2.1, capacity: 130 door skins per hour.

(g) One (1) spray booth coating operation, approved for construction in 2007, identified as TLI Coating Line, and consisting of:

(1) One (1) automatic line with five (5) paint booths, two (2) electric powered infrared drying banks, and five (5) electric flash stations, individually identified as Booth 1 through Booth 5, IR Drying Banks 1 and 2, and Flash 1 through Flash 5, collectively identified as TLI Automatic Line, with a maximum capacity of 60 doors per hour or 50 patio units per hour, using dry filters as control, and exhausting to stacks TLI-1 through TLI-5, respectively. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered a miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(2) Two (2) manual paint booths, identified as TLI Manual Booths, with a combined maximum capacity of 14 units per hour, and using dry filters as control. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered a miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(3) One (1) paint kitchen for mixing, handling, and storing paint. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(4) One (1) spray booth, identified as TLI-8, approved for construction in 2010, with a maximum capacity of seven (7) units per hour, and using dry filters for particulate control. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(5) One (1) cutout machine, identified as TLI cutout, modified in 2010, with a maximum throughput capacity of 1,1375 pounds per hour, using cyclone TLI DC-1 for particulate control.

(h) One (1) concrete door adhesive spraying operation, approved for construction in 2007, identified as CD-3, with a maximum capacity of 24 doors per hour, using dry filters as control, and exhausting to Stack CD3-1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(i) One (1) cutout machine, identified as CO-4, approved for construction in 2009, with a maximum throughput capacity of 2,450 pounds per hour, using a baghouse for particulate control, and exhausting to stack SDMC-2.1.

(j) One (1) double cut saw, identified as DCS-2, approved for construction in 2009, with a maximum throughput capacity of 2,470 pounds per hour, using a baghouse for particulate control, and

exhausting to stack DCS-2.1.

(k) One (1) miscellaneous sawing/trimming operation, identified as MS-2, approved for construction in 2009, with a maximum throughput capacity of 2,470 pounds per hour, using baghouse for particulate control, and exhausting to stack DCS-2.1.

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

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

D.1.1 PSD Minor Limit [326 IAC 2-2]

(a) Pursuant to 326 IAC 2-2, the PM/PM10 emissions from each facility listed in the table below shall not exceed its specified limit:

| Emission Unit | PM/PM10 limit (pounds per hour) |
|---|---|
| SDMC-2A | 1.80 |
| FDMC-2A | 2.54 |
| FDMC-2B | 1.80 |
| CO-4 | 0.49 |
| DCS-2 | 0.32 |
| MS-2 | 0.49 |
| SDMC-2B | 0.10 |
| SMCDM-1 | 0.01 |
| D2-MS1 | 2.54 |
| D2-MS1-1 | 1.8 |
| PA-1 | 0.067 |
| CO-1, CO-2 and CO-3 | 1.47 |
| DH-1 | 0.05 |
| EU4 | 16.17 |
| DCS-1 | 0.64 |
| TLI Misc. | 1.57 |
| TLI Cut Out | 3.43 |

(b) Pursuant to 326 IAC 2-2, the total PM/PM10 emissions from the surface coating facilities listed in table below shall not exceed 78 tons per twelve (12) consecutive month period.

| Process | Emission Unit ID |
|---|---|
| TLI Coating Line | Booth 1-8 |
| A-Line | SP-2 |
| BPO2 Line | Booths 1 through 9 |
| CD-3 | CD-3 |

Compliance with the above limits in conjunction with Conditions D.2.2, D.3.4 and D.4.3, and PTE of PM/PM10 from D2-F1, SMC2, SCO-2, D2-OV2, FCO-2, EG-1 and EG-2 will limit source-wide non-fugitive PM/PM10 emissions to less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

D.1.2 PSD Minor Limit for Particulate Matter [326 IAC 2-2]

The total PM/PM10 from CD-3 and the TLI Coating Line shall not exceed fifteen (15) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to SSM No. 033-25066-00019.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 not applicable, the Permittee shall limit the input of VOC including coatings, dilution solvents, and cleaning solvents to the TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), to less than twenty-five (25) tons per twelve (12) consecutive month period when coating plastic products, with compliance determined at the end of each month.

Compliance with the above limit shall limit the VOC emissions from the TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), to less than twenty-five (25) tons per twelve (12) consecutive month period and render 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable to SSM No. 033-25066-00019 with respect to VOC.

D.1.4 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the owner or operator shall not allow the discharge into the atmosphere VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicators at D2-APP1, the TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2 and BPO2 Line when coating metal products.

D.1.5 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not be limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.1.6 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) adhesive application station (D2-APP1), TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), the one (1) concrete door adhesive spraying operation (CD-3), the spray booth coating operation (SP-2), and BPO2 Line shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.1.7 Particulate [326 IAC 6-3-2]

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

| Emission Unit/Activity | Process Weight Rate (tons/hr) | Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr) |
|---|---|---|
| EU4 | 8.1 | 16.65 |
| D2-MS1 and D2-MS1-1 | 9.0 | 17.87 |
| PA-1 | 0.38 | 2.15 |
| CO-1, CO-2, and CO-3 | 1.225 | 4.70 |
| DH-1 | 0.352 | 2.03 |
| DCS-1 | 1.235 | 4.72 |
| SDMC-2A | 8.1 | 16.65 |
| SDMC-2B | 8.1 | 16.65 |
| FDMC-2A | 9.1 | 18 |
| FDMC-2B | 9.1 | 18 |
| CO-4 | 1.225 | 4.7 |
| DCS-2 | 1.235 | 4.72 |
| MS-2 | 1.235 | 4.72 |

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

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

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

**Compliance Determination Requirements**

D.1.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

Compliance with the VOC usage and content limitations contained in Conditions D.1.3 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.

D.1.9 Particulate Matter (PM/PM10) Emissions Determination [326 IAC 2-2]

Compliance with Condition D.1.1(b) and D.1.2 shall be determined by calculating the $PM/PM_{10}$ emissions associated with each coating applied at the emission units listed in Conditions D.1.1(b) and D.1.2 using the following equation:

PM/PM10 = (∑CU x D x W%S) x [1-(TE/100)] x [1-(CE/100)] x 1/2000

Where:

| | |
|---|---|
| PM/PM10 = | The total PM/PM10 emissions (ton/month) for all coatings. |
| CU = | The total Coating use (gal coating/month) of each coating. |
| D = | The density (lb coating/gal coating) of each coating. |
| W%S = | The weight percent solids (lb solids/lb coating) of each coating. |
| TE = | The transfer efficiency (%) of the spray applicators. This value shall be equal 75% for High Volume and Low Pressure (HVLP) spray application method and 50% for Airless spray application method; unless an IDEM approved test is conducted, in which case the value shall equal that determined from the most recent IDEM approved test. |
| CE = | The control efficiency (%) of the dry filters. This value shall be equal 95%. |

D.1.10 Particulate Control [326 IAC 2-7-6(6)][326 IAC 2-2]

(a) In order to comply with Conditions D.1.1 and D.1.7, the particulate control devices equipped on the emission units listed in Conditions D.1.1 and D.1.7 shall be in operation and control emissions from its associated emission units at all times that the associated emission units are in operation.

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

D.1.11 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate the compliance with Condition D.1.1(a), the Permittee shall perform PM and PM10 testing on FDMC-2A and FDMC-2B on whichever later date from the time period specified in (1) and (2) below.

(1) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8, 2008.

(2) Within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup.

PM10 includes filterable PM.

The above testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.

(b) In order to demonstrate the compliance with Condition D.1.1(b), the Permittee shall conduct transfer efficiency testing on one (1) of the booths in BPO2 Line no later than

180 days after the initial start-up of BPO2 Line. The testing shall be performed using 'Airless Spray' application method. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. The repeat testing shall be done on a booth from BPO2 Line that has not been tested in the past ten (10) years. Testing shall be conducted using methods approved by the Commissioner and in accordance with 326 IAC 3-6-3. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.1.12 Monitoring [40 CFR 64]

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters equipped on SP-2, booths of TLI coating line, and BPO2 Line.

(b) To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the stacks (Stacks TLI-1, TLI-2, TLI-3, TLI-4, TLI-5, SP-2.1, SBPO2-1 through SBPO2-6 and SBPO2-7 through SBPO2-9) while one or more of the associated booths are in operation. If a condition exists which should result in a response step, the Permittee shall take 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 condition. Failure to take response steps shall be considered a deviation from this permit.

(c) Monthly inspections shall be performed of the coating emissions from the stacks (TLI-1, TLI-2, TLI-3, TLI-4, TLI-5, SP-2.1, SBPO2-1 through SBPO2-6 and SBPO2-7 through SBPO2-9) 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 emissions is observed, the Permittee shall take 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 condition. Failure to take response steps shall be considered a deviation from this permit.

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for SP-2, Booths 1 through 5 of TLI coating line, SBPO2-1 through SBPO2-6 and SBPO2-7 through SBPO2-9.

D.1.13 Monitoring

(a) Weekly inspections shall be performed to verify the placement, integrity and particle loading of the dry filters used in conjunction with CD-3.

(b) To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the stacks CD3-1, TLI-6, TLI-7 and TLI-8 while the associated coating facilities with these stacks are in operation. If a condition exists which should result in a response step, the Permittee shall take 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 condition. Failure to take response steps shall be considered a deviation from this permit.

(c) Monthly inspections shall be performed of the coating emissions from the stacks CD3-1, TLI-6, TLI-7 and TLI-8 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 emissions is observed, the Permittee shall take 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 condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.14 Visible Emissions Notations

(a) Visible emission notations of the EU4; D2-MS1 and D2-MS1-1; CO-1, CO-2, CO-3, PA-1, and DH-1 stack exhausts (Stacks DC1-1, 20.1, and DC3-1), and SDMC-2A, FDMC-2A, FDMC-2B, CO-4, DCS-2, MS-2, SDMC-2B, and SMCDM-1 stack exhausts, and TLI Cut Out exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.1.15 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) The Permittee shall record the pressure drop across the dust collectors, cyclone and baghouse used in conjunction with EU4; D2-APP1; D2-MS1 and D2-MS1-1; PA-1, DH-1, CO-1, CO-2, CO-3, DCS-1, SDMC-2A, FDMC-2A, FDMC-2B, CO-4, DCS-2, MS-2, SDMC-2B, SMCDM-1 and TLI Cut Out at least once per day when any of these facilities are in operation. When for any one reading, the pressure drop across either control device is outside the normal range of 1.0 and 7 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.16 Broken or Failed Bag Detection

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

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

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

D.1.17 Cyclone Failure Detection

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

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

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

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

D.1.18 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

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

(2) The amount of coating material and solvent less water used 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 total VOC usage for each month.

(4) The cleanup solvent usage for each month.

(5) The total VOC usage for each compliance period.

(b) To document the compliance status with Conditions D.1.1(b) and D.1.2, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) though (3) shall be taken monthly and shall be complete and sufficient to demonstrate compliance with the PM/PM10 emission limits established in Condition D.1.2.

(1) The amount of each coating material used (as applied). Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(2) The density and weight percent solids of each coating material used (as applied).

(3) The transfer efficiency (TE) of the spray guns used at coating operations listed in Condition D.1.1(b) and D.1.2.

(c) To document the compliance status with Condition D.1.4, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limit established in Condition D.1.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC content of each coating, as received, and solvent used less water.

(A) Records shall include material safety data sheets (MSDS) necessary to verify the type of coating and solvent used.

(2) The VOC content of each coating, as applied.

(A) Records shall include type and amount of solvent added to each coating for dilution.

(d) To document the compliance status with Condition D.1.12 and D.1.13, the Permittee shall maintain a log of weekly overspray observations, and daily, weekly and monthly inspections.

(e) To document the compliance status with Condition D.1.14, the Permittee shall maintain records of visible emission notations of the EU4; D2-MS1 and D2-MS1-1; CO-1, CO-2, CO-3, PA-1, and DH-1 stack exhausts (Stacks DC1-1, 20.1, and DC3-1) when vented to atmosphere and SDMC-2A, FDMC-2A, FDMC-2B, CO-4, DCS-2, MS-2, SDMC-2B, and SMCDM-1 stack exhausts and TLI Cut Out exhaust when vented to atmosphere once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).

(f) To document the compliance status with Condition D.1.15, the Permittee shall maintain records once per day of the pressure drop during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).

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

D.1.19 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1(b), D.1.2, and D.1.3, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. This report requires the certification 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(15)]:** SMC Operations subject to NESHAP WWWW

(i) One (1) Sheet Molding Compound (SMC) Production Line, identified as SMC2, installed in 2000, capacity: 18,500 pounds of molding compound per hour, consisting of:

(1) Two (2) calcium carbonate silos, identified as SILO1 and SILO2, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 8,800 pounds of calcium carbonate per hour, each, capacity: 200,000 pounds of calcium carbonate, each.

(2) Two (2) resin mixers, exhausting through Stack 17.1 and/or Stack 17.2, total throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(3) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(j) Six (6) sheet molding compound (SMC) presses, identified as Presses 1 through 6, installed in 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(k) One (1) sheet molding compound (SMC) press, identified as Press 7, installed in February 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(l) One (1) sheet molding compound (SMC) press, identified as Press 8, installed in August 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(m) One (1) sheet molding compound (SMC) press, identified as Press 9, installed in March 1999, exhausting inside, capacity: 862.5 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(n) Four (4) sheet molding compound (SMC) presses, identified as Presses 11 through 14, installed in 2000, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(o) One (1) sheet molding compound (SMC) press, identified as Press 15, installed in March 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(p) One (1) sheet molding compound (SMC) press, identified as Press 16, installed in May 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(q) One (1) sheet molding compound (SMC) press, identified as Press 17, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(r) One (1) sheet molding compound (SMC) press, identified as Press 18, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(s) One (1) sheet molding compound (SMC) press, identified as Press 19, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(t) One (1) sheet molding compound (SMC) press, identified as Press 20, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(u) Five (5) sheet molding compound (SMC) presses, identified as Presses 21 through 25, installed in 2005, exhausting inside, capacity: 1,067 pounds of SMC per hour each and a combined total of 4,826 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

**Insignificant Activities**

(c) Four (4) five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(d) Three (3) five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(e) Six (6) above ground resin storage tanks, identified as Tanks 1 through 6, exhausting through stack 17.1 and/or stack 17.2 capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than three (3) pounds per hour and fifteen (15) pounds per day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(f) Five (5) resin holding tanks consisting of two (2) tanks, identified as A Side-Tank 1 and A Side-Tank 2 capacity: 1,500 gallons of resin each, and three (3) tanks, identified B Side-1 through B Side-3, capacity: 80 gallons of resin, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(g) One (1) 6,300-gallon tank storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(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 Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2, the particulate emission rate from SILO1 and SILO2 shall not exceed 11.06 pounds per hour, each, when operating at a process weight rate of 8,800 pounds per hour (4.4 tons per hour), each.

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

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

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

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

Pursuant to 326 IAC 2-2, the PM/PM10 emissions from SILO1 and SILO2 shall not exceed 0.17 pounds per hour, each.

Compliance with the above limits in conjunction with Conditions D.1.1, D.3.4 and D.4.3 and PTE of PM/PM10 from D2-F1, SMC2, SCO-2, D2-OV2, FCO-2, EG-1 and EG-2 will limit source-wide non-fugitive PM/PM10 emissions to less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

**Compliance Determination Requirements**

D.2.3 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions D.2.1 and D.2.2, the baghouses for particulate control shall be in operation and control emissions from SILO1 and SILO2 at all times that these facilities are in operation.

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

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

D.2.4 Visible Emissions Notations

(a) Visible emission notations of the SILO1 and SILO2 stack exhausts (Stacks 25.2 and 25.3) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.2.5 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with SILO1 and SILO2 at least once per day when SILO1 or SILO2 is in operation. When for any one reading, the pressure drop across either baghouse is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.6 Broken or Failed Bag Detection

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

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

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

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

D.2.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.4, the Permittee shall maintain records of visible emission notations of the SILO1 and SILO2 stack exhausts (Stacks 25.2 and 25.3) once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).

(b) To document the compliance status with Condition D.2.5, the Permittee shall maintain records once per day of the pressure drop during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading

is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).

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

## SECTION D.3 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:** Insignificant Activities

(a) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(b) Grinding and machining operations controlled with sock filter, fabric filters, and a cyclone (TLI DC-1) with a design grain loading of less than or equal to 0.03 grains per actual cubic feet and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking. [326 IAC 6-3-2]

(c) Activities with particulate emissions less than 5 lbs/hour or 25 lbs/day, controlled by baghouse:

(1) Three (3) fiberglass skin cut down saws (FS-1, FS-2 and FS-3) [326 IAC 6-3-2].

(2) One (1) sanding booth (FS-4) [326 IAC 6-3-2].

(d) One (1) cold cleaning/degreasing operation, identified as CC-2, approved for construction in 2009, with a maximum solvent usage capacity of 1 gallon per day, and venting inside the building.

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

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

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

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

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

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120OF)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.3.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the insignificant grinding and machining operations, including FS-1, FS-2, FS-3 and FS-4, shall not exceed an amount determined by the following:

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

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

D.3.4 PSD Minor Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2, the PM/PM10 emissions from each facility listed in the table below shall not exceed its specified limit:

| Emission Unit | PM/PM10 limit (pounds per hour) |
|---|---|
| Grinding and machining operations | 1.80 |
| FS-1 | 0.026 |
| FS-2 | 0.057 |
| FS-3 | 0.057 |
| FS-4 | 0.057 |

Compliance with the above limits in conjunction with Conditions D.1.1, D.2.2 and D.4.3, and PTE of PM/PM10 from D2-F1, SMC2, SCO-2, D2-OV2, FCO-2, EG-1 and EG-2 will limit source-wide non-fugitive PM/PM10 emissions to less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

**Compliance Determination Requirements**

D.3.5 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions D.3.3 and D.3.4, the particulate control equipped on Grinding and machining operations, FS-1, FS-2, FS-3, FS-4 shall be in operation and control emissions from Grinding and machining operations, FS-1, FS-2, FS-3, FS-1 at all times that these facilities are in operation.

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

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

D.3.6 Visible Emissions Notations

(a) Visible emission notations of the Grinding and machining operations, FS-1, FS-2, FS-3, FS-4 exhausts shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.3.7 Broken or Failed Cyclone/Bag Detection

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

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

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

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

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

D.3.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of visible emission notations of the Grinding and machining operations, FS-1, FS-2, FS-3, FS-4 once per week. The Permittee shall include in its weekly record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).

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

## SECTION D.4 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:** Deflashing station

(a) One (1) deflashing station, identified as DF-2, installed in 2009, equipped with a cartridge dust collector for particulate control, exhausting inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(b) One (1) deflashing station, identified as DF-1, approved for installation in 2006, equipped with a cartridge dust collector for particulate control, exhausted inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(c) One (1) deflashing station, identified as DF-3, approved for construction in 2010, with a maximum throughput capacity of 13,680 pounds per hour, equipped with a cartridge dust collector for particulate control, exhausting to stack SDMC-2.1.

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

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

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from each of the deflashing stations (DF-1, DF-2, and DF-3) shall not exceed 14.87 pounds per hour when operating at a process weight rate of 13,680 pounds per hour (6.84 tons per hour). The pound per hour limitation was calculated using the following equation:

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

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

D.4.2 Minor Source Modification (PM and PM10) [326 IAC 2-7-10.5(d)(4)(C)]

Pursuant to 326 IAC 2-7-10.5(d)(4)(C), the PM/PM10 emissions from the deflashing station identified as DF-1 shall not exceed 0.19 pounds per hour.

Compliance with this limit ensures that the PM/PM10 emissions from MSM No. 033-23835-00019, issued on December 13, 2006, are less than twenty-five (25) tons per year.

D.4.3 PSD Minor [326 IAC 2-2]

Pursuant to 326 IAC 2-2, the PM/PM10 emissions from the deflashing stations identified as DF-1, DF-2, DF-3 shall not exceed 0.19, 0.19 and 0.7 pounds per hour, respectively.

Compliance with the above limits in conjunction with Conditions D.1.1, D.2.2 and D.3.4, and PTE of PM/PM10 from D2-F1, SMC2, SCO-2, D2-OV2, FCO-2, EG-1 and EG-2 will limit source-wide non-fugitive PM/PM10 emissions to less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

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

D.4.4 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions D.4.1, D.4.2 and D.4.3, the cartridge dust collector for particulate control shall be in operation and control emissions from the associated deflashing station**s** at all times that the associated deflashing**s** station is in operation.

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

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

D.4.5 Visible Emissions Notations

(a) Visible emission notations of the deflashing stations' exhaust shall be performed once per day during normal daylight operations when exhausting outside to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.4.6 Dust Collector Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the cartridges used in conjunction with the deflashing stations (DF-1 andDF-2) at least once per day when the deflashing stations are in operation. When for any one (1) reading, the pressure drop across the cartridge is outside the normal range of 1.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall take 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 condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.4.7 Broken or Failed Cartridge Detection

(a) For a single compartment dust collector controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately

until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

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

D.4.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.5, the Permittee shall maintain records of visible emission notations of the deflashing stations' exhaust once per day when exhausting to the atmosphere. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).

(b) To document the compliance status with Condition D.4.6, the Permittee shall maintain records once per day of the pressure drop. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).

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

## SECTION D.5 Source-Wide VOC Emission Limit

Emissions Unit Description:

(a) One (1) steel door assembly line, identified as A-Line, consisting of following operations, approved for construction in 2009:

(1) One (1) enclosed spray coating operation, identified as SP-2, using airless spray application method, with a maximum capacity of 360 steel doors per hour with 0.14 gallons per steel door coating usage rate, using dry filters for particulate control, and exhausting to stack SP-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(2) One (1) adhesive coating operation, identified as SA-2, with a maximum capacity of 360 steel doors per hour with 0.20 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SA-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(3) One (1) foaming operation, identified as SF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SF-2.1.

(b) One (1) Door Assembly Line, identified as B-Line, installed in 2000, capacity: 20,250 pounds of doors per hour or 360 doors per hour, consisting of:

(1) One (1) adhesive application station, identified as D2-APP1, without add-on control, exhausting through Stack 18.2, capacity: 43 pounds of adhesive per hour or 360 doors per hour. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(2) One (1) door foam injection system, identified as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 360 doors per hour.

(c) One (1) fiberglass door assembly line, identified as C-Line, consisting of following operations, approved for construction in 2009:

(1) One (1) adhesive coating operation, identified as FA-2, with a maximum capacity of 360 steel doors per hour with 0.01 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SVFA-2. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(2) One (1) foaming operation, identified as FF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SVFF-2.

(d) One (1) conveyorized coating line, identified as BPO2, consisting of the following operations, approved in 2011 for construction:

(1) Six (6) coating booths, identified as booths 1 through 6, using airless spray application method, with a maximum capacity of 60 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-1 through SBPO2-6.

(2) Three (3) manual booths, identified as booths 7 through 9, using airless spray application method, with a maximum capacity of 14 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-7 through SBPO2-9.

(g) One (1) spray booth coating operation, approved for construction in 2007, identified as TLI Coating Line, and consisting of:

(1) One (1) automatic line with five (5) paint booths, two (2) electric powered infrared drying banks, and five (5) electric flash stations, individually identified as Booth 1 through Booth 5, IR Drying Banks 1 and 2, and Flash 1 through Flash 5, collectively identified as TLI Automatic Line, with a maximum capacity of 60 doors per hour or 50 patio units per hour, using dry filters as control, and exhausting to stacks TLI-1 through TLI-5, respectively. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(2) Two (2) manual paint booths, identified as TLI Manual Booths (booths 6 and 7), with a combined maximum capacity of 14 units per hour, and using dry filters as control and exhausting to stacks TLI-6 and TLI-7. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(3) One (1) paint kitchen for mixing, handling, and storing paint. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(4) One (1) spray booth identified as TLI booth 8, approved for construction in 2010, with a maximum capacity of seven (7) units per hour, and using dry filters for particulate control and exhausting to stack TLI-8. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(h) One (1) concrete door adhesive spraying operation, approved for construction in 2007, identified as CD-3, with a maximum capacity of 24 doors per hour, using dry filters as control, and exhausting to Stack CD3-1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(i) One (1) Sheet Molding Compound (SMC) Production Line, identified as SMC2, installed in 2000, capacity: 18,500 pounds of molding compound per hour, consisting of:

(1) Two (2) resin mixers, exhausting through Stack 17.1 and/or Stack 17.2, total throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(2) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(j) Six (6) sheet molding compound (SMC) presses, identified as Presses 1 through 6, installed in 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(k) One (1) sheet molding compound (SMC) press, identified as Press 7, installed in February 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(l) One (1) sheet molding compound (SMC) press, identified as Press 8, installed in August 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(m) One (1) sheet molding compound (SMC) press, identified as Press 9, installed in March 1999, exhausting inside, capacity: 862.5 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(n) Four (4) sheet molding compound (SMC) presses, identified as Presses 11 through 14, installed in 2000, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(o) One (1) sheet molding compound (SMC) press, identified as Press 15, installed in March 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(p) One (1) sheet molding compound (SMC) press, identified as Press 16, installed in May 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(q) One (1) sheet molding compound (SMC) press, identified as Press 17, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(r) One (1) sheet molding compound (SMC) press, identified as Press 18, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(s) One (1) sheet molding compound (SMC) press, identified as Press 19, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(t) One (1) sheet molding compound (SMC) press, identified as Press 20, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(u) Five (5) sheet molding compound (SMC) presses, identified as Presses 21 through 25, installed in 2005, exhausting inside, capacity: 1,067 pounds of SMC per hour each and a combined total of 4,826 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

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

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

D.5.1 PSD Minor Limit [326 IAC 2-2]

The total sum of VOC usage (including coatings, dilution solvents, and cleaning solvents) at the coating facilities identified as D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, and FA-2, the two (2) foaming operations (FF-2 and SF-2), and the one (1) foam injection system (D2-F1), and VOC emissions from the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25 and BPO2 Line shall not exceed 246 tons per twelve (12) consecutive months period with compliance determined at the end of each month.

Compliance with this emission limit in conjunction with the VOC PTE of SCO-2, D2-OV2, EG-1, EG-2, FCO-2, the sixty-four (64) insignificant combustion units, and the insignificant tanks emissions (including tank T001), will ensure that the source-wide non-fugitive VOC emissions from the entire source are less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

**Compliance Determination Requirements**

D.5.2 Volatile Organic Compounds (VOC)

(a) In order to comply with Condition D.5.1, the Permittee shall determine VOC usage (including coatings, dilution solvents, foaming agents and cleaning solvents) for each twelve (12) consecutive months period at each of the following coating facilities: D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, and FA-2, the two (2) foaming operations (FF-2 and SF-2), the one (1) foam injection system (D2-F1) and BPO2 Line.

(b) In order to comply with Condition D.5.1, the VOC emissions from the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25 shall be determined by the following equation:

VOC emissions from the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25 (tons per twelve consecutive months) = ∑ SMC throughput at Presses 1 through 25 and SMC2 (mixers and extruder) (tons per twelve consecutive months) x [% VOC content of the SMC / 100] x [0.03 (fraction of VOC content of the SMC which is emitted)]

D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

In order to comply with Condition D.5.1, the VOC content and usage of the foaming agents and coating material (including coatings, dilution solvents, and cleaning solvents) used at the coating facilities identified as D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, and FA-2, the two (2) foaming operations (FF-2 and SF-2), the one (1) foam injection system (D2-F1) and BPO2 Line 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.

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

D.5.4 Record Keeping Requirements

(a) To document the compliance status with Conditions D.5.1, D.5.2, and D.5.3 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to determine the VOC usage as required in Condition D.5.1 for the coating facilities identified as D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, and FA-2, the two (2) foaming operations (FF-2 and SF-2), the one (1) foam injection system (D2-F1) and BPO2 Line. Records necessary to determine the VOC usage as required in Condition D.5.1 shall be available within 30 days of the end of each compliance period.

(1) The VOC content of each coating material, foaming agents and solvent used.

(2) The amount of coating material, foaming agents and solvent less water 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 total VOC usage for each month.

(4) The total VOC usage for each compliance period.

(b) To document the compliance status with Conditions D.5.1 and D.5.2, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to determine the VOC emissions as required in Condition D.5.1 for the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The total SMC throughput at Presses 1 through 25 and SMC2 (mixers and extruder) each month.

(2) The VOC content of each SMC material used at Presses 1 through 25 and SMC2 (mixers and extruder).

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

D.5.5 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements 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 E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Door Assembly

(a) One (1) steel door assembly line, identified as A-Line, consisting of following operations, approved for construction in 2009:

(1) One (1) enclosed spray coating operation, identified as SP-2, using airless spray application method, with a maximum capacity of 360 steel doors per hour with 0.14 gallons per steel door coating usage rate, using dry filters for particulate control, and exhausting to stack SP-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(2) One (1) adhesive coating operation, identified as SA-2, with a maximum capacity of 360 steel doors per hour with 0.20 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SA-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(d) One (1) conveyorized coating line, identified as BPO2, consisting of the following operations, approved in 2011 for construction:

(1) Six (6) coating booths, identified as booths 1 through 6, using airless spray application method, with a maximum capacity of 60 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-1 through SBPO2-6.

(2) Three (3) manual booths, identified as booths 7 through 9, using airless spray application method, with a maximum capacity of 14 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-7 through SBPO2-9.

(g) One (1) spray booth coating operation, approved for construction in 2007, identified as TLI Coating Line, and consisting of:

(1) One (1) automatic line with five (5) paint booths, two (2) electric powered infrared drying banks, and five (5) electric flash stations, individually identified as Booth 1 through Booth 5, IR Drying Banks 1 and 2, and Flash 1 through Flash 5, collectively identified as TLI Automatic Line, with a maximum capacity of 60 doors per hour or 50 patio units per hour, using dry filters as control, and exhausting to stacks TLI-1 through TLI-5, respectively. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(2) Two (2) manual paint booths, identified as TLI Manual Booths, with a combined maximum capacity of 14 units per hour, and using dry filters as control. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(3) One (1) paint kitchen for mixing, handling, and storing paint. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(4) One (1) spray booth, identified as TLI-8, approved for construction in 2010, with a maximum capacity of seven (7) units per hour, and using dry filters for particulate control. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(h) One (1) concrete door adhesive spraying operation, approved for construction in 2007, identified as CD-3, with a maximum capacity of 24 doors per hour, using dry filters as control, and exhausting to Stack CD3-1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

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

**NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(1)] [40 CFR 63, Subpart MMMM]**

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

(a) Pursuant to 40 CFR 63.3901, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the surface coating operations, as specified in Table 2 of 40 CFR 63, Subpart MMMM in accordance with schedule in 40 CFR 63, Subpart MMMM.

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

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

and

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

E.1.2 Miscellaneous Metal Part and Products Surface Coating Requirements [40 CFR Part 63, Subpart MMMM]

Pursuant to 40 CFR Part 63, Subpart MMMM, the Permittee shall comply on and after the initial compliance date: January 2, 2007 with the following provisions of 40 CFR Part 63, Subpart MMMM (included as 'Attachment B'), which are incorporated by reference as 326 IAC 20-80, for the facilities listed in this section:

(1) 40 CFR 63.3880
(2) 40 CFR 63.3881 (a)(1), (a)(2), (b), (d), and (e)
(3) 40 CFR 63.3882
(4) 40 CFR 63.3883 (b), and (d)
(5) 40 CFR 63.3890 (b)(1)
(6) 40 CFR 63.3891 (b)
(7) 40 CFR 63.3892 (a)

(8) 40 CFR 63.3893 (a)
(9) 40 CFR 63.3900 (a)(1), (b)
(10) 40 CFR 63.3901
(11) 40 CFR 63.3910 all except (c)(8)(i)(iii) and (c)(9)
(12) 40 CFR 63.3920 (a)(1), (a)(2), (a)(3), (a)(4), and (a)(6)
(13) 40 CFR 63.3930 all except (c)(2)(4) and (k)
(14) 40 CFR 63.3931
(15) 40 CFR 63.3950
(16) 40 CFR 63.3951
(17) 40 CFR 63.3952
(18) 40 CFR 63.3980
(19) 40 CFR 63.3981
(21) Table 2
(22) Table 3
(23) Table 4

E.1.3 One-Time Deadlines Relating to Miscellaneous Metal Part and Products Surface Coating Notifications [40 CFR Part 63, Subpart MMMM]

The Permittee shall comply with the following notification requirements by the dates listed:

| Requirement | Rule Cite | Affected Facility | Deadline |
|---|---|---|---|
| Submit Initial Notification | 40 CFR 63.3910(b) | Entire Source | January 2, 2005 |
| Conduct Initial Compliance Demonstrations | 40 CFR 63.3940, 63.3950, 63.3960 | Entire Source | January 31, 2008 |
| Notification of Compliance Status | 40 CFR 63.3910(c) | Entire Source | March 1, 2008 |
| First Semiannual Compliance Report | 40 CFR 63.3920(a)(1) | Entire Source | July 31, 2008 |

## SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Door Assembly

(b) One (1) Door Assembly Line, identified as B-Line, installed in 2000, capacity: 20,250 pounds of doors per hour or 360 doors per hour, consisting of:

(1) One (1) adhesive application station, identified as D2-APP1, without add-on control, exhausting through Stack 18.2, capacity: 43 pounds of adhesive per hour or 360 doors per hour.

(c) One (1) fiberglass door assembly line, identified as C-Line, consisting of following operations, approved for construction in 2009:

(1) One (1) adhesive coating operation, identified as FA-2, with a maximum capacity of 360 steel doors per hour with 0.01 gallons per steel door coating usage rate, without add-on control, and exhausting to a stack.

(d) One (1) conveyorized coating line, identified as BPO2, consisting of the following operations, approved in 2011 for construction:

(1) Six (6) coating booths, identified as booths 1 through 6, using airless spray application method, with a maximum capacity of 60 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-1 through SBPO2-6.

(2) Three (3) manual booths, identified as booths 7 through 9, using airless spray application method, with a maximum capacity of 14 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-7 through SBPO2-9.

(g) One (1) spray booth coating operation, approved for construction in 2007, identified as TLI Coating Line, and consisting of:

(1) One (1) automatic line with five (5) paint booths, two (2) electric powered infrared drying banks, and five (5) electric flash stations, individually identified as Booth 1 through Booth 5, IR Drying Banks 1 and 2, and Flash 1 through Flash 5, collectively identified as TLI Automatic Line, with a maximum capacity of 60 doors per hour or 50 patio units per hour, using dry filters as control, and exhausting to stacks TLI-1 through TLI-5, respectively; and

(2) Two (2) manual paint booths, identified as TLI Manual Booths, with a combined maximum capacity of 14 units per hour, and using dry filters as control.

(3) One (1) paint kitchen for mixing, handling, and storing paint.

(4) One (1) spray booth, identified as TLI-8, approved for construction in 2010, with a maximum capacity of seven (7) units per hour, and using dry filters for particulate control.

(h) One (1) concrete door adhesive spraying operation, approved for construction in 2007, identified as CD-3, with a maximum capacity of 24 doors per hour, using dry filters as control, and exhausting to Stack CD3-1.

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

**NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(1)] [40 CFR 63, Subpart PPPP]**

E.2.1 General Provisions Relating to NESHAP PPPP [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.4480, 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 40 CFR Part 63, Subpart PPPP in accordance with schedule in 40 CFR 63 Subpart PPPP.

E.2.2 Coating of Plastic Parts and Products NESHAP [40 CFR Part 63, Subpart PPPP]

Pursuant to 40 CFR Part 63, Subpart PPPP, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart PPPP (included as 'Attachment C'), which are incorporated by reference as 326 IAC 20-81, for the facilities listed in this section:

(1) 40 CFR 63.4480
(2) 40 CFR 63.4481 (a)(1), (a)(2), (b), and (e)
(3) 40 CFR 63.4482
(4) 40 CFR 63.4483 (b) and (d)
(5) 40 CFR 63.4490 (b)(1)
(6) 40 CFR 63.4491 (b)
(7) 40 CFR 63.4492 (a)
(8) 40 CFR 63.4493 (a)
(9) 40 CFR 63.4500 (a)(2) and (b)
(10) 40 CFR 63.4501
(11) 40 CFR 63.4510 all except (c)(8)(i)(iii) and (c)(9)
(12) 40 CFR 63.4520 (a)(1), (a)(2), (a)(3), (a)(4), and (a)(6)
(13) 40 CFR 63.4530 all except (c)(2)(4) and (j)
(14) 40 CFR 63.4531
(15) 40 CFR 63.4550
(16) 40 CFR 63.4551
(17) 40 CFR 63.4552
(18) 40 CFR 63.4580
(19) 40 CFR 63.4581
(20) Table 2
(21) Table 3
(22) Table 4
(23) Appendix A

E.2.3 One-Time Deadlines Relating to Coating of Plastic Parts and Products NESHAP [40 CFR Part 63, Subpart PPPP]

The Permittee shall comply with the following notification requirements by the dates listed:

| Requirement | Rule Cite | Deadline |
|---|---|---|
| Submit Initial Notification | 40 CFR 63.4510(b) | No later than April 19, 2005 |
| Compliance Date | 40 CFR 63.4483(b) | April 19, 2007 |
| Conduct Initial Compliance Demonstration | 40 CFR 63.4550 | April 30, 2007 to April 30, 2008 |
| Notification of Compliance Status | 40 CFR 63.4510(c) | No later than May 30, 2008 |
| Semiannual Compliance Reports | 40 CFR 63.4520(a)(1) | July 31, 2008, and every January 31 and July 31 thereafter |

## SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:** SMC Operations subject to NESHAP WWWW

(i) One (1) Sheet Molding Compound (SMC) Production Line, identified as SMC2, installed in 2000, capacity: 18,500 pounds of molding compound per hour, consisting of:

(1) Two (2) resin mixers, exhausting through Stack 17.1 and/or Stack 17.2, total throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(2) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(j) Six (6) sheet molding compound (SMC) presses, identified as Presses 1 through 6, installed in 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(k) One (1) sheet molding compound (SMC) press, identified as Press 7, installed in February 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(l) One (1) sheet molding compound (SMC) press, identified as Press 8, installed in August 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(m) One (1) sheet molding compound (SMC) press, identified as Press 9, installed in March 1999, exhausting inside, capacity: 862.5 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(n) Four (4) sheet molding compound (SMC) presses, identified as Presses 11 through 14, installed in 2000, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(o) One (1) sheet molding compound (SMC) press, identified as Press 15, installed in March 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(p) One (1) sheet molding compound (SMC) press, identified as Press 16, installed in May 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(q) One (1) sheet molding compound (SMC) press, identified as Press 17, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP),

Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(r) One (1) sheet molding compound (SMC) press, identified as Press 18, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(s) One (1) sheet molding compound (SMC) press, identified as Press 19, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(t) One (1) sheet molding compound (SMC) press, identified as Press 20, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(u) Five (5) sheet molding compound (SMC) presses, identified as Presses 21 through 25, installed in 2005, exhausting inside, capacity: 1,067 pounds of SMC per hour each and a combined total of 4,826 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

**Insignificant Activities**

(c) Four (4) five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(d) Three (3) five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(e) Six (6) above ground resin storage tanks, identified as Tanks 1 through 6, exhausting through stack 17.1 and/or stack 17.2 capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than three (3) pounds per hour and fifteen (15) pounds per day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(f) Five (5) resin holding tanks consisting of two (2) tanks, identified as A Side-Tank 1 and A Side-Tank 2 capacity: 1,500 gallons of resin each, and three (3) tanks, identified B Side-1 through B Side-3, capacity: 80 gallons of resin, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(g) One (1) 6,300-gallon tank storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(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)] [40 CFR 63, Subpart WWWW]**

### E.3.1 General Provisions Relating to NESHAP WWWW [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.5925, 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 15 of 40 CFR Part 63, Subpart WWWW in accordance with the schedule in 40 CFR 63 Subpart WWWW.

### E.3.2 NESHAP WWWW Requirements [40 CFR Part 63, Subpart WWWW]

Pursuant to CFR Part 63, Subpart WWWW, the Permittee shall comply with the following provisions (included as 'Attachment A'), which are incorporated by reference as 326 IAC 20-56, for the Sheet Molding Compound (SMC) Production Line, identified as SMC2, the SMC presses (Presses 1 through 9 and 11 through 25), and equipment cleaning, cleaning of materials used in reinforced plastic composites manufacture, mixing, and HAP-containing material storage.:

(1) 63.5780
(2) 63.5785 (a)
(3) 63.5790 (a), (b) and (c)
(4) 63.5795 (a)(1) and (a)(2), (b)
(5) 63.5797 (a), (b) and (c)
(6) 63.5800
(7) 63.5805 (a), (b) and (g)
(8) 63.5835 (a) and (c)
(9) 63.5840
(10) 63.5860 (a)
(11) 63.5900 (a)(4), (b) and (c)
(12) 63.5905
(13) 63.5910 (a), (b), (c)(1) through (c)(5), (d), (g), (h) and (i)
(14) 63.5915 (a) and (d)
(15) 63.5920
(16) 63.5925
(17) 63.5930
(18) 63.5935

## SECTION E.4 FACILITY OPERATION CONDITIONS

**Emissions Unit Description:**

(j) One (1) diesel fuel-fired reciprocating emergency generator, identified as EG-1, rated at fifty (50) kW (~67 HP), (ordered in October 2010), and approved in 2010 for construction. The diesel generator, identified as EG-1, is considered an affected facility under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and a new stationary reciprocating internal combustion engine at an area source of hazardous air pollutants under NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CRF 63, Subpart ZZZZ).

(k) One (1) diesel fuel-fired compression ignition emergency generator for fire suppression system, identified as EG-2 rated at fifty (350) kilowatt (kW) (~469.2 HP), in stalled in 2005. EG-2, is considered an existing affected facility under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and an existing stationary reciprocating internal combustion engine at an area source of hazardous air pollutants under NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CRF 63, Subpart ZZZZ).

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 2-7-5(1)]**

E.4.1 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ][326 IAC 20-82]

The Permittee, which owns or operates stationary Reciprocating Internal Combustion Engines, shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ, which are incorporated by reference as 326 IAC 20-82:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(ii) and (c) (EG-1 only)
(4) 40 CFR 63.6590(a)(1)(ii) and (c) (EG-2 only)
(5) 40 CFR 63.6595(a)(5)
(6) 40 CFR 63.6665
(7) 40 CFR 63.6670
(8) 40 CFR 63.6675

The entire text of 40 CFR 63, Subpart ZZZZ, is included as Attachment D of this permit.

**New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart IIII] [326 IAC 2-7-5(1)]**

E.4.2 General Provisions Relating to NSPS [40 CFR 60, Subpart A][326 IAC 12-1]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart IIII.

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.4.3 New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart IIII][326 IAC 12]

The Permittee, which owns or operates stationary compression ignition internal combustion engines, shall comply with the following provisions of 40 CFR Part 60, Subpart IIII, which are incorporated by reference as 326 IAC 12:

(1) 40 CFR 60.4200(a)(2),
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (e)
(8) 40 CFR 60.4214(b)
(9) 40 CFR 60.4218
(10) 40 CFR 60.4219

The entire text of 40 CFR 60, Subpart IIII, is included as Attachment E of this permit.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY

## PART 70 OPERATING PERMIT
## CERTIFICATION

Source Name: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019

**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: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019

**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), no later than 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 no later than 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<br>Describe: |
| Type of Pollutants Emitted: TSP, PM-10, $SO_2$, VOC, $NO_X$, CO, Pb, other: |
| Estimated amount of pollutant(s) emitted during emergency: |
| Describe the steps taken to mitigate the problem: |
| Describe the corrective actions/response steps taken: |
| Describe the measures taken to minimize emissions: |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

### Part 70 Quarterly Report

Source Name: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019
Facilities: TLI Coating Line
Parameter: Input of VOC
Limit: Total VOC input including coatings, dilution solvents, and cleaning solvents for the TLI Coating Line shall be less than a total of twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

| Month | Input of VOC (tons) | Input of VOC (tons) | Input of VOC (tons) |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
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: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019
Facilities: TLI Coating Line and CD-3
Parameter: PM / $PM_{10}$ Emissions
Limit: Total PM / $PM_{10}$ emissions for the TLI Coating Line and CD-3 shall be less than a total of fifteen (15) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

| Month | PM / PM-10 Emissions (tons) | PM / PM-10 Emissions (tons) | PM / PM-10 Emissions (tons) |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
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: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019
Facilities: D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, FA-2, the two (2) foaming operations (FF-2 and SF-2), and the one (1) foam injection system (D2-F1), SMC Presses 1 through 25 and SMC2 (mixers and extruder) and BPO2 Line.
Parameter: The total sum of VOC usage (including coatings, dilution solvents, and cleaning solvents) at the coating facilities D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, FA-2, the two (2) foaming operations (FF-2 and SF-2), and the one (1) foam injection system (D2-F1), and VOC emissions from SMC Presses 1 through 25, SMC2 (mixers and extruder) and BPO2 Line.
Limit: 246 tons per twelve (12) consecutive month period

YEAR: _____

| Month | Total Input of VOC to the coating facilities D2-APP1, TLI Coating Line (booths 1- 8), CD-3, SP-2, SA-2, FA-2, FF-2, SF-2, D2-F1 (tons), and BPO2 Line | | Total VOC emissions from the SMC Presses 1 through 25 and SMC2 (mixers and extruder) (tons) | | VOC Emissions (tons) |
|---|---|---|---|---|---|
| | This Month | Previous 11 Months | This Month | Previous 11 Months | 12 Month Total |
| | A | B | C | D | =A+B+C+D |
| | | | | | |
| | | | | | |
| | | | | | |

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this month.
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: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019
Facilities: TLI Coating Line (Booths 1-8), SP-2, BPO2 Line and CD-3
Parameter: PM/PM10 Emissions
Limit: Shall not exceed 78 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

| Month | PM/PM10 Emissions (tons) | PM/PM10 Emissions (tons) | PM/PM10 Emissions (tons) |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
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: Therma Tru Corporation
Source Address: 601 RE Jones Road, Butler, Indiana 46721
Part 70 Permit No.: T 033-17546-00019

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



| | |
|---|---|
| This report shall be submitted quarterly based on a calendar year. 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:** | |

Page 2 of 2

| | |
|---|---|
| **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. T033-30711-00019**

Therma Tru Corporation
601 RE Jones Road
Butler, Indiana 46721

# Title 40: Protection of Environment

## 40 CFR 63, Subpart WWWW—National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production

**Source:** 68 FR 19402, Apr. 21, 2003, unless otherwise noted.

### What This Subpart Covers

### § 63.5780 What is the purpose of this subpart?

This subpart establishes national emissions standards for hazardous air pollutants (NESHAP) for reinforced plastic composites production. This subpart also establishes requirements to demonstrate initial and continuous compliance with the hazardous air pollutants (HAP) emissions standards.

### § 63.5785 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a reinforced plastic composites production facility that is located at a major source of HAP emissions. Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The resins and gel coats may also contain materials designed to enhance the chemical, physical, and/or thermal properties of the product. Reinforced plastic composites production also includes cleaning, mixing, HAP-containing materials storage, and repair operations associated with the production of plastic composites.

(b) You are not subject to this subpart if your facility only repairs reinforced plastic composites. Repair includes the non-routine manufacture of individual components or parts intended to repair a larger item as defined in §63.5935

(c) You are not subject to this subpart if your facility is a research and development facility as defined in section 112(c)(7) of the Clean Air Act (CAA).

(d) You are not subject to this subpart if your reinforced plastic composites operations use less than 1.2 tons per year (tpy) of thermoset resins and gel coats that contain styrene combined.

### § 63.5787 What if I also manufacture fiberglass boats or boat parts?

(a) If your source meets the applicability criteria in §63.5785, and is not subject to the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV), you are subject to this subpart regardless of the final use of the parts you manufacture.

(b) If your source is subject to 40 CFR part 63, subpart VVVV, and all the reinforced plastic composites you manufacture are used in manufacturing your boats, you are not subject to this subpart.

(c) If you are subject to 40 CFR part 63, subpart VVVV, and meet the applicability criteria in §63.5785, and produce reinforced plastic composites that are not used in fiberglass boat manufacture at your facility, all operations associated with the manufacture of the reinforced plastic composites parts that are not used in fiberglass boat manufacture at your facility are subject to this subpart, except as noted in paragraph (d) of this section.

(d) Facilities potentially subject to both this subpart and 40 CFR part 63, subpart VVVV may elect to have the operations in paragraph (c) of this section covered by 40 CFR part 63, subpart VVVV, in lieu of this subpart, if they can demonstrate that this will not result in any organic HAP emissions increase compared to complying with this subpart.

## § 63.5790 What parts of my plant does this subpart cover?

(a) This subpart applies to each new or existing affected source at reinforced plastic composites production facilities.

(b) The affected source consists of all parts of your facility engaged in the following operations: Open molding, closed molding, centrifugal casting, continuous lamination, continuous casting, polymer casting, pultrusion, sheet molding compound (SMC) manufacturing, bulk molding compound (BMC) manufacturing, mixing, cleaning of equipment used in reinforced plastic composites manufacture, HAP-containing materials storage, and repair operations on parts you also manufacture.

(c) The following operations are specifically excluded from any requirements in this subpart: application of mold sealing and release agents; mold stripping and cleaning; repair of parts that you did not manufacture, including non-routine manufacturing of parts; personal activities that are not part of the manufacturing operations (such as hobby shops on military bases); prepreg materials as defined in §63.5935; non-gel coat surface coatings; application of putties, polyputties, and adhesives; repair or production materials that do not contain resin or gel coat; research and development operations as defined in section 112(c)(7) of the CAA; polymer casting; and closed molding operations (except for compression/injection molding). Note that the exclusion of certain operations from any requirements applies only to operations specifically listed in this paragraph. The requirements for any co-located operations still apply.

(d) Production resins that must meet military specifications are allowed to meet the organic HAP limit contained in that specification. In order for this exemption to be used, you must supply to the permitting authority the specifications certified as accurate by the military procurement officer, and those specifications must state a requirement for a specific resin, or a specific resin HAP content. Production resins for which this exemption is used must be applied with nonatomizing resin application equipment unless you can demonstrate this is infeasible. You must keep a record of the resins for which you are using this exemption.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50124, Aug. 25, 2005]

## § 63.5795 How do I know if my reinforced plastic composites production facility is a new affected source or an existing affected source?

(a) A reinforced plastic composites production facility is a new affected source if it meets all the criteria in paragraphs (a)(1) and (2) of this section.

(1) You commence construction of the source after August 2, 2001.

(2) You commence construction, and no other reinforced plastic composites production source exists at that site.

(b) For the purposes of this subpart, an existing affected source is any affected source that is not a new affected source.

[70 FR 50124, Aug. 25, 2005]

## Calculating Organic HAP Emissions Factors for Open Molding and Centrifugal Casting

### § 63.5796 What are the organic HAP emissions factor equations in Table 1 to this subpart, and how are they used in this subpart?

Emissions factors are used in this subpart to determine compliance with certain organic HAP emissions limits in Tables 3 and 5 to this subpart. You may use the equations in Table 1 to this subpart to calculate your emissions factors. Equations are available for each open molding operation and centrifugal casting operation and have units of pounds of organic HAP emitted per ton (lb/ton) of resin or gel coat applied. These equations are intended to provide a method for you to demonstrate compliance without the need to conduct for a HAP emissions test. In lieu of these equations, you can elect to use site-specific organic HAP emissions factors to demonstrate compliance provided your site-specific organic HAP emissions factors are incorporated in the facility's air emissions permit and are based on actual facility HAP emissions test data. You may also use the organic HAP emissions factors calculated using the equations in Table 1 to this subpart, combined with resin and gel coat use data, to calculate your organic HAP emissions.

### § 63.5797 How do I determine the organic HAP content of my resins and gel coats?

In order to determine the organic HAP content of resins and gel coats, you may rely on information provided by the material manufacturer, such as manufacturer's formulation data and material safety data sheets (MSDS), using the procedures specified in paragraphs (a) through (c) of this section, as applicable.

(a) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for Occupational Safety and Health Administration-defined carcinogens, as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other organic HAP compounds.

(b) If the organic HAP content is provided by the material supplier or manufacturer as a range, you must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content, such as an analysis of the material by EPA Method 311 of appendix A to 40 CFR part 63, exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, then you must use the measured organic HAP content to determine compliance.

(c) If the organic HAP content is provided as a single value, you may use that value to determine compliance. If a separate measurement of the total organic HAP content is made and is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then you still may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, then you must use the measured organic HAP content to determine compliance.

### § 63.5798 What if I want to use, or I manufacture, an application technology (new or existing) whose organic HAP emissions characteristics are not represented by the equations in Table 1 to this subpart?

If you wish to use a resin or gel coat application technology (new or existing), whose emission characteristics are not represented by the equations in Table 1 to this subpart, you may use the procedures in paragraphs (a) or (b) of this section to establish an organic HAP emissions factor. This organic HAP emissions factor may then be used to determine compliance with the emission limits in this subpart, and to calculate facility organic HAP emissions.

(a) Perform an organic HAP emissions test to determine a site-specific organic HAP emissions factor using the test procedures in §63.5850.

(b) Submit a petition to the Administrator for administrative review of this subpart. This petition must contain a description of the resin or gel coat application technology and supporting organic HAP emissions test data obtained using EPA test methods or their equivalent. The emission test data should be obtained using a range of resin or gel coat HAP contents to demonstrate the effectiveness of the technology under the

different conditions, and to demonstrate that the technology will be effective at different sites. We will review the submitted data, and, if appropriate, update the equations in Table 1 to this subpart.

## § 63.5799 How do I calculate my facility's organic HAP emissions on a tpy basis for purposes of determining which paragraphs of §63.5805 apply?

To calculate your facility's organic HAP emissions in tpy for purposes of determining which paragraphs in §63.5805 apply to you, you must use the procedures in either paragraph (a) of this section for new facilities prior to startup, or paragraph (b) of this section for existing facilities and new facilities after startup. You are not required to calculate or report emissions under this section if you are an existing facility that does not have centrifugal casting or continuous lamination/casting operations, or a new facility that does not have any of the following operations: Open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC and BMC manufacturing, and mixing. Emissions calculation and emission reporting procedures in other sections of this subpart still apply. Calculate organic HAP emissions prior to any add-on control device, and do not include organic HAP emissions from any resin or gel coat used in operations subject to the Boat Manufacturing NESHAP, 40 CFR part 63, subpart VVVV, or from the manufacture of large parts as defined in §63.5805(d)(2). For centrifugal casting operations at existing facilities, do not include any organic HAP emissions where resin or gel coat is applied to an open centrifugal mold using open molding application techniques. Table 1 and the Table 1 footnotes to this subpart present more information on calculating centrifugal casting organic HAP emissions. The timing and reporting of these calculations is discussed in paragraph (c) of this section.

(a) For new facilities prior to startup, calculate a weighted average organic HAP emissions factor for the operations specified in §63.5805(c) and (d) on a lbs/ton of resin and gel coat basis. Base the weighted average on your projected operation for the 12 months subsequent to facility startup. Multiply the weighted average organic HAP emissions factor by projected resin use over the same period. You may calculate your organic HAP emissions factor based on the factors in Table 1 to this subpart, or you may use any HAP emissions factor approved by us, such as factors from the “Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP–42),” or organic HAP emissions test data from similar facilities.

(b) For existing facilities and new facilities after startup, you may use the procedures in either paragraph (b)(1) or (2) of this section. If the emission factors for an existing facility have changed over the period of time prior to their initial compliance date due to incorporation of pollution-prevention control techniques, existing facilities may base the average emission factor on their operations as they exist on the compliance date. If an existing facility has accepted an enforceable permit limit that would result in less than 100 tpy of HAP measured prior to any add-on controls, and can demonstrate that they will operate at that level subsequent to the compliance date, they can be deemed to be below the 100 tpy threshold.

(1) *Use a calculated emission factor.* Calculate a weighted average organic HAP emissions factor on a lbs/ton of resin and gel coat basis. Base the weighted average on the prior 12 months of operation. Multiply the weighted average organic HAP emissions factor by resin and gel coat use over the same period. You may calculate this organic HAP emissions factor based on the equations in Table 1 to this subpart, or you may use any organic HAP emissions factor approved by us, such as factors from AP–42, or site-specific organic HAP emissions factors if they are supported by HAP emissions test data.

(2) *Conduct performance testing.* Conduct performance testing using the test procedures in §63.5850 to determine a site-specific organic HAP emissions factor in units of lbs/ton of resin and gel coat used. Conduct the test under conditions expected to result in the highest possible organic HAP emissions. Multiply this factor by annual resin and gel coat use to determine annual organic HAP emissions. This calculation must be repeated and reported annually.

(c) Existing facilities must initially perform this calculation based on their 12 months of operation prior to April 21, 2003, and include this information with their initial notification report. Existing facilities must repeat the calculation based on their resin and gel coat use in the 12 months prior to their initial compliance date, and submit this information with their initial compliance report. After their initial compliance date, existing and new facilities must recalculate organic HAP emissions over the 12-month period ending June 30 or December 31, whichever date is the first date following their compliance date specified in §63.5800. Subsequent calculations should cover the periods in the semiannual compliance reports.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50124, Aug. 25, 2005]

## Compliance Dates and Standards

### § 63.5800 When do I have to comply with this subpart?

You must comply with the standards in this subpart by the dates specified in Table 2 to this subpart. Facilities meeting an organic HAP emissions standard based on a 12-month rolling average must begin collecting data on the compliance date in order to demonstrate compliance.

### § 63.5805 What standards must I meet to comply with this subpart?

You must meet the requirements of paragraphs (a) through (h) of this section that apply to you. You may elect to comply using any options to meet the standards described in §§63.5810 through 63.5830. Use the procedures in §63.5799 to determine if you meet or exceed the 100 tpy threshold.

(a) If you have an existing facility that has any centrifugal casting or continuous casting/lamination operations, you must meet the requirements of paragraph (a)(1) or (2) of this section:

(1) If the combination of all centrifugal casting and continuous lamination/casting operations emit 100 tpy or more of HAP, you must reduce the total organic HAP emissions from centrifugal casting and continuous lamination/casting operations by at least 95 percent by weight. As an alternative to meeting the 95 percent by weight requirement, centrifugal casting operations may meet the applicable organic HAP emissions limits in Table 5 to this subpart and continuous lamination/casting operations may meet an organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied. For centrifugal casting, the percent reduction requirement does not apply to organic HAP emissions that occur during resin application onto an open centrifugal casting mold using open molding application techniques.

(2) If the combination of all centrifugal casting and continuous lamination/casting operations emit less than 100 tpy of HAP, then centrifugal casting and continuous lamination/casting operations must meet the appropriate requirements in Table 3 to this subpart.

(b) All operations at existing facilities not listed in paragraph (a) of this section must meet the organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply, regardless of the quantity of HAP emitted.

(c) If you have a new facility that emits less than 100 tpy of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing, you must meet the organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply to you.

(d)(1) Except as provided in paragraph (d)(2) of this section, if you have a new facility that emits 100 tpy or more of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing, you must reduce the total organic HAP emissions from these operations by at least 95 percent by weight and meet any applicable work practice standards in Table 4 to this subpart that apply to you. As an alternative to meeting 95 percent by weight, you may meet the organic HAP emissions limits in Table 5 to this subpart. If you have a continuous lamination/casting operation, that operation may alternatively meet an organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied.

(2)(i) If your new facility manufactures large reinforced plastic composites parts using open molding or pultrusion operations, the specific open molding and pultrusion operations used to produce large parts are not required to reduce HAP emissions by 95 weight percent, but must meet the emission limits in Table 3 to this subpart.

(ii) A large open molding part is defined as a part that, when the final finished part is enclosed in the smallest rectangular six-sided box into which the part can fit, the total interior volume of the box exceeds 250 cubic feet, or any interior sides of the box exceed 50 square feet.

(iii) A large pultruded part is a part that exceeds an outside perimeter of 24 inches or has more than 350 reinforcements.

(e) If you have a new or existing facility subject to paragraph (a)(2) or (c) of this section at its initial compliance date that subsequently meets or exceeds the 100 tpy threshold in any calendar year, you must notify your permitting authority in your compliance report. You may at the same time request a one-time exemption from the requirements of paragraph (a)(1) or (d) of this section in your compliance report if you can demonstrate all of the following:

(1) The exceedance of the threshold was due to circumstances that will not be repeated.

(2) The average annual organic HAP emissions from the potentially affected operations for the last 3 years were below 100 tpy.

(3) Projected organic HAP emissions for the next calendar year are below 100 tpy, based on projected resin and gel coat use and the HAP emission factors calculated according to the procedures in §63.5799.

(f) If you apply for an exemption in paragraph (e) of this section and subsequently exceed the HAP emission thresholds specified in paragraph (a)(2) or (c) of this section over the next 12-month period, you must notify the permitting authority in your semiannual report, the exemption is removed, and your facility must comply with paragraph (a)(1) or (d) of this section within 3 years from the time your organic HAP emissions first exceeded the threshold.

(g) If you have repair operations subject to this subpart as defined in §63.5785, these repair operations must meet the requirements in Tables 3 and 4 to this subpart and are not required to meet the 95 percent organic HAP emissions reduction requirements in paragraph (a)(1) or (d) of this section.

(h) If you use an add-on control device to comply with this subpart, you must meet all requirements contained in 40 CFR part 63, subpart SS.

[70 FR 50124, Aug. 25, 2005]

## Options for Meeting Standards

### § 63.5810 What are my options for meeting the standards for open molding and centrifugal casting operations at new and existing sources?

You must use one of the following methods in paragraphs (a) through (d) of this section to meet the standards for open molding or centrifugal casting operations in Table 3 or 5 to this subpart. You may use any control method that reduces organic HAP emissions, including reducing resin and gel coat organic HAP content, changing to nonatomized mechanical application, using covered curing techniques, and routing part or all of your emissions to an add-on control. You may use different compliance options for the different operations listed in Table 3 or 5 to this subpart. The necessary calculations must be completed within 30 days after the end of each month. You may switch between the compliance options in paragraphs (a) through (d) of this section. When you change to an option based on a 12-month rolling average, you must base the average on the previous 12 months of data calculated using the compliance option you are changing to, unless you were previously using an option that did not require you to maintain records of resin and gel coat use. In this case, you must immediately begin collecting resin and gel coat use data and demonstrate compliance 12 months after changing options.

(a) *Demonstrate that an individual resin or gel coat, as applied, meets the applicable emission limit in Table 3 or 5 to this subpart.* (1) Calculate your actual organic HAP emissions factor for each different process stream within each operation type. A process stream is defined as each individual combination of resin or

gel coat, application technique, and control technique. Process streams within operations types are considered different from each other if any of the following four characteristics vary: the neat resin plus or neat gel coat plus organic HAP content, the gel coat type, the application technique, or the control technique. You must calculate organic HAP emissions factors for each different process stream by using the appropriate equations in Table 1 to this subpart for open molding and for centrifugal casting, or site-specific organic HAP emissions factors discussed in §63.5796. The emission factor calculation should include any and all emission reduction techniques used including any add-on controls. If you are using vapor suppressants to reduce HAP emissions, you must determine the vapor suppressant effectiveness (VSE) by conducting testing according to the procedures specified in appendix A to subpart WWWW of 40 CFR part 63. If you are using an add-on control device to reduce HAP emissions, you must determine the add-on control factor by conducting capture and control efficiency testing using the procedures specified in §63.5850. The organic HAP emissions factor calculated from the equations in Table 1 to this subpart, or a site-specific emissions factor, is multiplied by the add-on control factor to calculate the organic HAP emissions factor after control. Use Equation 1 of this section to calculate the add-on control factor used in the organic HAP emissions factor equations.

$$\text{Add-on Control Factor} = 1 - \frac{\%\ \text{Control Efficiency}}{100} \qquad \text{(Eq. 1)}$$

Where:

Percent Control Efficiency=a value calculated from organic HAP emissions test measurements made according to the requirements of §63.5850 to this subpart.

(2) If the calculated emission factor is less than or equal to the appropriate emission limit, you have demonstrated that this process stream complies with the emission limit in Table 3 to this subpart. It is not necessary that all your process streams, considered individually, demonstrate compliance to use this option for some process streams. However, for any individual resin or gel coat you use, if any of the process streams that include that resin or gel coat are to be used in any averaging calculations described in paragraphs (b) through (d) of this section, then all process streams using that individual resin or gel coat must be included in the averaging calculations.

(b) *Demonstrate that, on average, you meet the individual organic HAP emissions limits for each combination of operation type and resin application method or gel coat type.* Demonstrate that on average you meet the individual organic HAP emissions limits for each unique combination of operation type and resin application method or gel coat type shown in Table 3 to this subpart that applies to you.

(1)(i) Group the process streams described in paragraph (a) to this section by operation type and resin application method or gel coat type listed in Table 3 to this subpart and then calculate a weighted average emission factor based on the amounts of each individual resin or gel coat used for the last 12 months. To do this, sum the product of each individual organic HAP emissions factor calculated in paragraph (a)(1) of this section and the amount of neat resin plus and neat gel coat plus usage that corresponds to the individual factors and divide the numerator by the total amount of neat resin plus and neat gel coat plus used in that operation type as shown in Equation 2 of this section.

$$\text{Average organic HAP Emissions Factor} = \frac{\sum_{i=1}^{n} (\text{Actual Process Stream EF}_i * \text{Material}_i)}{\sum_{i=1}^{n} Material_i} \qquad \text{(Eq. 2)}$$

Where:

Actual Process Stream $EF_i$=actual organic HAP emissions factor for process stream i, lbs/ton;

$Material_i$=neat resin plus or neat gel coat plus used during the last 12 calendar months for process stream i, tons;

n=number of process streams where you calculated an organic HAP emissions factor.

(ii) You may, but are not required to, include process streams where you have demonstrated compliance as described in paragraph (a) of this section, subject to the limitations described in paragraph (a)(2) of this section, and you are not required to and should not include process streams for which you will demonstrate compliance using the procedures in paragraph (d) of this section.

(2) Compare each organic HAP emissions factor calculated in paragraph (b)(1) of this section with its corresponding organic HAP emissions limit in Table 3 or 5 to this subpart. If all emissions factors are equal to or less than their corresponding emission limits, then you are in compliance.

(c) *Demonstrate compliance with a weighted average emission limit.* Demonstrate each month that you meet each weighted average of the organic HAP emissions limits in Table 3 or 5 to this subpart that apply to you. When using this option, you must demonstrate compliance with the weighted average organic HAP emissions limit for all your open molding operations, and then separately demonstrate compliance with the weighted average organic HAP emissions limit for all your centrifugal casting operations. Open molding operations and centrifugal casting operations may not be averaged with each other.

(1) Each month calculate the weighted average organic HAP emissions limit for all open molding operations and the weighted average organic HAP emissions limit for all centrifugal casting operations for your facility for the last 12-month period to determine the organic HAP emissions limit you must meet. To do this, multiply the individual organic HAP emissions limits in Table 3 or 5 to this subpart for each open molding (centrifugal casting) operation type by the amount of neat resin plus or neat gel coat plus used in the last 12 months for each open molding (centrifugal casting) operation type, sum these results, and then divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding (centrifugal casting) over the last 12 months as shown in Equation 3 of this section.

$$\text{Weighted Average Emission Limit} = \frac{\sum_{i=1}^{n} (EL_i * Material_i)}{\sum_{i=1}^{n} Material_i} \qquad \text{(Eq. 3)}$$

Where:

$EL_i$=organic HAP emissions limit for operation type i, lbs/ton from Tables 3 or 5 to this subpart;

$Material_i$=neat resin plus or neat gel coat plus used during the last 12-month period for operation type i, tons;

n=number of operations.

(2) Each month calculate your weighted average organic HAP emissions factor for open molding and centrifugal casting. To do this, multiply your actual open molding (centrifugal casting) operation organic HAP emissions factors calculated in paragraph (b)(1) of this section and the amount of neat resin plus and neat gel coat plus used in each open molding (centrifugal casting) operation type, sum the results, and divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding (centrifugal casting) operations as shown in Equation 4 of this section.

$$\text{Actual Weighted Average organic HAP Emissions Factor} = \frac{\sum_{i=1}^{n}(\text{Actual Operation EF}_i * \text{Material}_i)}{\sum_{i=1}^{n} Material_i} \qquad \text{(Eq. 4)}$$

Where:

Actual Individual $EF_i$=Actual organic HAP emissions factor for operation type i, lbs/ton;

$Material_i$=neat resin plus or neat gel coat plus used during the last 12 calendar months for operation type i, tons;

n=number of operations.

(3) Compare the values calculated in paragraphs (c)(1) and (2) of this section. If each 12-month rolling average organic HAP emissions factor is less than or equal to the corresponding 12-month rolling average organic HAP emissions limit, then you are in compliance.

(d) *Meet the organic HAP emissions limit for one application method and use the same resin(s) for all application methods of that resin type.* This option is limited to resins of the same type. The resin types for which this option may be used are noncorrosion-resistant, corrosion-resistant and/or high strength, and tooling.

(1) For any combination of manual resin application, mechanical resin application, filament application, or centrifugal casting, you may elect to meet the organic HAP emissions limit for any one of these application methods and use the same resin in all of the resin application methods listed in this paragraph (d)(1). Table 7 to this subpart presents the possible combinations based on a facility selecting the application process that results in the highest allowable organic HAP content resin. If the resin organic HAP content is below the applicable value shown in Table 7 to this subpart, the resin is in compliance.

(2) You may also use a weighted average organic HAP content for each application method described in paragraph (d)(1) of this section. Calculate the weighted average organic HAP content monthly. Use Equation 2 in paragraph (b)(1) of this section except substitute organic HAP content for organic HAP emissions factor. You are in compliance if the weighted average organic HAP content based on the last 12 months of resin use is less than or equal to the applicable organic HAP contents in Table 7 to this subpart.

(3) You may simultaneously use the averaging provisions in paragraph (b) or (c) of this section to demonstrate compliance for any operations and/or resins you do not include in your compliance demonstrations in paragraphs (d)(1) and (2) of this section. However, any resins for which you claim compliance under the option in paragraphs (d)(1) and (2) of this section may not be included in any of the averaging calculations described in paragraph (b) or (c) of this section.

(4) You do not have to keep records of resin use for any of the individual resins where you demonstrate compliance under the option in paragraph (d)(1) of this section unless you elect to include that resin in the averaging calculations described in paragraph (d)(2) of this section.

[70 FR 50125, Aug. 25, 2005]

### § 63.5820 What are my options for meeting the standards for continuous lamination/casting operations?

You must use one or more of the options in paragraphs (a) through (d) of this section to meet the standards in §63.5805. Use the calculation procedures in §§63.5865 through 63.5890.

(a) *Compliant line option.* Demonstrate that each continuous lamination line and each continuous casting line complies with the applicable standard.

(b) *Averaging option.* Demonstrate that all continuous lamination and continuous casting lines combined, comply with the applicable standard.

(c) *Add-on control device option.* If your operation must meet the 58.5 weight percent organic HAP emissions reduction limit in Table 3 to this subpart, you have the option of demonstrating that you achieve 95 percent reduction of all wet-out area organic HAP emissions.

(d) *Combination option.* Use any combination of options in paragraphs (a) and (b) of this section or, for affected sources at existing facilities, any combination of options in paragraphs (a), (b), and (c) of this section (in which one or more lines meet the standards on their own, two or more lines averaged together meet the standards, and one or more lines have their wet-out areas controlled to a level of 95 percent).

### § 63.5830 What are my options for meeting the standards for pultrusion operations subject to the 60 weight percent organic HAP emissions reductions requirement?

You must use one or more of the options in paragraphs (a) through (e) of this section to meet the 60 weight percent organic HAP emissions limit in Table 3 to this subpart, as required in §63.5805.

(a) Achieve an overall reduction in organic HAP emissions of 60 weight percent by capturing the organic HAP emissions and venting them to a control device or any combination of control devices. Conduct capture and destruction efficiency testing as specified in 63.5850 to this subpart to determine the percent organic HAP emissions reduction.

(b) Design, install, and operate wet area enclosures and resin drip collection systems on pultrusion machines that meet the criteria in paragraphs (b)(1) through (10) of this section.

(1) The enclosure must cover and enclose the open resin bath and the forming area in which reinforcements are pre-wet or wet-out and moving toward the die(s). The surfaces of the enclosure must be closed except for openings to allow material to enter and exit the enclosure.

(2) For open bath pultrusion machines with a radio frequency pre-heat unit, the enclosure must extend from the beginning of the resin bath to within 12.5 inches or less of the entrance of the radio frequency pre-heat unit. If the stock that is within 12.5 inches or less of the entrance to the radio frequency pre-heat unit has any drip, it must be enclosed. The stock exiting the radio frequency pre-heat unit is not required to be in an enclosure if the stock has no drip between the exit of the radio frequency pre-heat unit to within 0.5 inches of the entrance of the die.

(3) For open bath pultrusion machines without a radio frequency pre-heat unit, the enclosure must extend from the beginning of the resin bath to within 0.5 inches or less of the die entrance.

(4) For pultrusion lines with pre-wet area(s) prior to direct die injection, no more than 12.5 inches of open wet stock is permitted between the entrance of the first pre-wet area and the entrance to the die. If the pre-wet stock has any drip, it must be enclosed.

(5) The total open area of the enclosure must not exceed two times the cross sectional area of the puller window(s) and must comply with the requirements in paragraphs (b)(5)(i) through (iii) of this section.

(i) All areas that are open need to be included in the total open area calculation with the exception of access panels, doors, and/or hatches that are part of the enclosure.

(ii) The area that is displaced by entering reinforcement or exiting product is considered open.

(iii) Areas that are covered by brush covers are considered closed.

(6) Open areas for level control devices, monitoring devices, agitation shafts, and fill hoses must have no more than 1.0 inch clearance.

(7) The access panels, doors, and/or hatches that are part of the enclosure must close tightly. Damaged access panels, doors, and/or hatches that do not close tightly must be replaced.

(8) The enclosure may not be removed from the pultrusion line, and access panels, doors, and/or hatches that are part of the enclosure must remain closed whenever resin is in the bath, except for the time period discussed in paragraph (b)(9) of this section.

(9) The maximum length of time the enclosure may be removed from the pultrusion line or the access panels, doors, and/or hatches and may be open, is 30 minutes per 8 hour shift, 45 minutes per 12 hour shift, or 90 minutes per day if the machine is operated for 24 hours in a day. The time restrictions do not apply if the open doors or panels do not cause the limit of two times the puller window area to be exceeded. Facilities may average the times that access panels, doors, and/or hatches are open across all operating lines. In that case the average must not exceed the times shown in this paragraph (b)(9). All lines included in the average must have operated the entire time period being averaged.

(10) No fans, blowers, and/or air lines may be allowed within the enclosure. The enclosure must not be ventilated.

(c) Use direct die injection pultrusion machines with resin drip collection systems that meet all the criteria specified in paragraphs (c)(1) through (3) of this section.

(1) All the resin that is applied to the reinforcement is delivered directly to the die.

(2) No exposed resin is present, except at the face of the die.

(3) Resin drip is captured in a closed system and recycled back to the process.

(d) Use a preform injection system that meets the definition in §63.5935

(e) Use any combination of options in paragraphs (a) through (d) of this section in which different pultrusion lines comply with different options described in paragraphs (a) through (d) of this section, and

(1) Each individual pultrusion machine meets the 60 percent reduction requirement, or

(2) The weighted average reduction based on resin throughput of all machines combined is 60 percent. For purposes of the average percent reduction calculation, wet area enclosures reduce organic HAP emissions by 60 percent, and direct die injection and preform injection reduce organic HAP emissions by 90 percent.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50127, Aug. 25, 2005]

## General Compliance Requirements

### § 63.5835 What are my general requirements for complying with this subpart?

(a) You must be in compliance at all times with the work practice standards in Table 4 to this subpart, as well as the organic HAP emissions limits in Tables 3, or 5, or the organic HAP content limits in Table 7 to this subpart, as applicable, that you are meeting without the use of add-on controls.

(b) You must be in compliance with all organic HAP emissions limits in this subpart that you meet using add-on controls, except during periods of startup, shutdown, and malfunction.

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

(d) You must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3) for any organic HAP emissions limits you meet using an add-on control.

[68 FR 19402, Apr. 21, 2003, as amended at 71 FR 20466, Apr. 20, 2006]

## Testing and Initial Compliance Requirements

### § 63.5840 By what date must I conduct a performance test or other initial compliance demonstration?

You must conduct performance tests, performance evaluations, design evaluations, capture efficiency testing, and other initial compliance demonstrations by the compliance date specified in Table 2 to this subpart, with three exceptions. Open molding and centrifugal casting operations that elect to meet an organic HAP emissions limit on a 12-month rolling average must initiate collection of the required data on the compliance date, and demonstrate compliance 1 year after the compliance date. New sources that use add-on controls to initially meet compliance must demonstrate compliance within 180 days after their compliance date.

### § 63.5845 When must I conduct subsequent performance tests?

You must conduct a performance test every 5 years following the initial performance test for any standard you meet with an add-on control device.

### § 63.5850 How do I conduct performance tests, performance evaluations, and design evaluations?

(a) If you are using any add-on controls to meet an organic HAP emissions limit in this subpart, you must conduct each performance test, performance evaluation, and design evaluation in 40 CFR part 63, subpart SS, that applies to you. The basic requirements for performance tests, performance evaluations, and design evaluations are presented in Table 6 to this subpart.

(b) Each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions that 40 CFR part 63, subpart SS, specifies.

(c) Each performance evaluation must be conducted according to the requirements in §63.8(e) as applicable and under the specific conditions that 40 CFR part 63, subpart SS, specifies.

(d) You may not conduct performance tests or performance evaluations during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(e) You must conduct the control device performance test using the emission measurement methods specified in paragraphs (e)(1) through (5) of this section.

(1) Use either Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select the sampling sites.

(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 18 of appendix A to 40 CFR part 60 to measure organic HAP emissions or use Method 25A of appendix A to 40 CFR part 60 to measure total gaseous organic emissions as a surrogate for total organic HAP emissions. If you use Method 25A, you must assume that all gaseous organic emissions measured as carbon are organic HAP emissions. If you use Method 18 and the number of organic HAP in the exhaust stream exceeds five, you must take into account the use of multiple chromatographic columns and analytical

techniques to get an accurate measure of at least 90 percent of the total organic HAP mass emissions. Do not use Method 18 to measure organic HAP emissions from a combustion device; use instead Method 25A and assume that all gaseous organic mass emissions measured as carbon are organic HAP emissions.

(4) You may use American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.) in lieu of Method 18 of 40 CFR part 60, appendix A, under the conditions specified in paragraphs (c)(4)(i) through (iii) of this section.

(i) If the target compound(s) is listed in Section 1.1 of ASTM D6420–99 and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

(ii) If the target compound(s) is not listed in Section 1.1 of ASTM D6420–99, but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in Section 10.5.3 of ASTM D6420–99, must be followed, met, documented, and submitted with the performance test report even if you do not use a moisture condenser or the compound is not considered soluble.

(iii) If a minimum of one sample/analysis cycle is completed at least every 15 minutes.

(5) Use the procedures in EPA Method 3B of appendix A to 40 CFR part 60 to determine an oxygen correction factor if required by §63.997(e)(2)(iii)(C). You may use American Society of Mechanical Engineers (ASME) PTC 19–10–1981–Part 10 (available for purchase from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, New Jersey, 07007–2900, or online at *www.asme.org/catalog* ) as an alternative to EPA Method 3B of appendix A to 40 CFR part 60.

(f) The control device performance test must consist of three runs and each run must last at least 1 hour. The production conditions during the test runs must represent normal production conditions with respect to the types of parts being made and material application methods. The production conditions during the test must also represent maximum potential emissions with respect to the organic HAP content of the materials being applied and the material application rates.

(g) If you are using a concentrator/oxidizer control device, you must test the combined flow upstream of the concentrator, and the combined outlet flow from both the oxidizer and the concentrator to determine the overall control device efficiency. If the outlet flow from the concentrator and oxidizer are exhausted in separate stacks, you must test both stacks simultaneously with the inlet to the concentrator to determine the overall control device efficiency.

(h) During the test, you must also monitor and record separately the amounts of production resin, tooling resin, pigmented gel coat, clear gel coat, and tooling gel coat applied inside the enclosure that is vented to the control device.

## § 63.5855 What are my monitor installation and operation requirements?

You must monitor and operate all add-on control devices according to the procedures in 40 CFR part 63, subpart SS.

## § 63.5860 How do I demonstrate initial compliance with the standards?

(a) You demonstrate initial compliance with each organic HAP emissions standard in paragraphs (a) through (h) of §63.5805 that applies to you by using the procedures shown in Tables 8 and 9 to this subpart.

(b) If using an add-on control device to demonstrate compliance, you must also establish each control device operating limit in 40 CFR part 63, subpart SS, that applies to you.

Emission Factor, Percent Reduction, and Capture Efficiency Calculation Procedures for Continuous Lamination/Casting Operations

## § 63.5865 What data must I generate to demonstrate compliance with the standards for continuous lamination/casting operations?

(a) For continuous lamination/casting affected sources complying with a percent reduction requirement, you must generate the data identified in Tables 10 and 11 to this subpart for each data requirement that applies to your facility.

(b) For continuous lamination/casting affected sources complying with a lbs/ton limit, you must generate the data identified in Tables 11 and 12 to this subpart for each data requirement that applies to your facility.

## § 63.5870 How do I calculate annual uncontrolled and controlled organic HAP emissions from my wet-out area(s) and from my oven(s) for continuous lamination/casting operations?

To calculate your annual uncontrolled and controlled organic HAP emissions from your wet-out areas and from your ovens, you must develop uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to apply to each formula applied on each line, determine how much of each formula for each end product is applied each year on each line, and assign uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to each formula. You must determine the overall capture efficiency using the procedures in §63.5850 to this subpart.

(a) To develop uncontrolled and controlled organic HAP emissions estimation equations and factors, you must, at a minimum, do the following, as specified in paragraphs (a)(1) through (6) of this section:

(1) Identify each end product and the thickness of each end product produced on the line. Separate end products into the following end product groupings, as applicable: corrosion-resistant gel coated end products, noncorrosion-resistant gel coated end products, corrosion-resistant nongel coated end products, and noncorrosion-resistant nongel coated end products. This step creates end product/thickness combinations.

(2) Identify each formula used on the line to produce each end product/thickness combination. Identify the amount of each such formula applied per year. Rank each formula used to produce each end product/thickness combination according to usage within each end product/thickness combination.

(3) For each end product/thickness combination being produced, select the formula with the highest usage rate for testing.

(4) If not already selected, also select the worst-case formula (likely to be associated with the formula with the highest organic HAP content, type of HAP, application of gel coat, thin product, low line speed, higher resin table temperature) amongst all formulae. (You may use the results of the worst-case formula test for all formulae if desired to limit the amount of testing required.)

(5) For each formula selected for testing, conduct at least one test (consisting of three runs). During the test, track information on organic HAP content and type of HAP, end product thickness, line speed, and resin temperature on the wet-out area table.

(6) Using the test results, develop uncontrolled and controlled organic HAP emissions estimation equations (or factors) or series of equations (or factors) that best fit the results for estimating uncontrolled and controlled organic HAP emissions, taking into account the organic HAP content and type of HAP, end product thickness, line speed, and resin temperature on the wet-out area table.

(b) In lieu of using the method specified in paragraph (a) of this section for developing uncontrolled and controlled organic HAP emissions estimation equations and factors, you may either method specified in paragraphs (b)(1) and (2) of this section, as applicable.

(1) For either uncontrolled or controlled organic HAP emissions estimates, you may use previously established, facility-specific organic HAP emissions equations or factors, provided they allow estimation of both wet-out area and oven organic HAP emissions, where necessary, and have been approved by your permitting authority. If a previously established equation or factor is specific to the wet-out area only, or to the oven only, then you must develop the corresponding uncontrolled or controlled equation or factor for the other organic HAP emissions source.

(2) For uncontrolled (controlled) organic HAP emissions estimates, you may use controlled (uncontrolled) organic HAP emissions estimates and control device destruction efficiency to calculate your uncontrolled (controlled) organic HAP emissions provided the control device destruction efficiency was calculated at the same time you collected the data to develop your facility's controlled (uncontrolled) organic HAP emissions estimation equations and factors.

(c) Assign to each formula an uncontrolled organic HAP emissions estimation equation or factor based on the end product/thickness combination for which that formula is used.

(d)(1) To calculate your annual uncontrolled organic HAP emissions from wet-out areas that do not have any capture and control and from wet-out areas that are captured by an enclosure but are vented to the atmosphere and not to a control device, multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results.

(2) To calculate your annual uncontrolled organic HAP emissions that escape from the enclosure on the wet-out area, multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor, sum the individual results, and multiply the summation by 1 minus the percent capture (expressed as a fraction).

(3) To calculate your annual uncontrolled oven organic HAP emissions, multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor and sum the individual results.

(4) To calculate your annual controlled organic HAP emissions, multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results to obtain total annual controlled organic HAP emissions.

(e) Where a facility is calculating both uncontrolled and controlled organic HAP emissions estimation equations and factors, you must test the same formulae. In addition, you must develop both sets of equations and factors from the same tests.

### § 63.5875 How do I determine the capture efficiency of the enclosure on my wet-out area and the capture efficiency of my oven(s) for continuous lamination/casting operations?

(a) The capture efficiency of a wet-out area enclosure is assumed to be 100 percent if it meets the design and operation requirements for a permanent total enclosure (PTE) specified in EPA Method 204 of appendix M to 40 CFR part 51. If a PTE does not exist, then a temporary total enclosure must be constructed and verified using EPA Method 204, and capture efficiency testing must be determined using EPA Methods 204B through E of appendix M to 40 CFR part 51.

(b) The capture efficiency of an oven is to be considered 100 percent, provided the oven is operated under negative pressure.

### § 63.5880 How do I determine how much neat resin plus is applied to the line and how much neat gel coat plus is applied to the line for continuous lamination/casting operations?

Use the following procedures to determine how much neat resin plus and neat gel coat plus is applied to the line each year.

(a) Track formula usage by end product/thickness combinations.

(b) Use in-house records to show usage. This may be either from automated systems or manual records.

(c) Record daily the usage of each formula/end product combination on each line. This is to be recorded at the end of each run ( *i.e.,* when a changeover in formula or product is made) and at the end of each shift.

(d) Sum the amounts from the daily records to calculate annual usage of each formula/end product combination by line.

### § 63.5885 How do I calculate percent reduction to demonstrate compliance for continuous lamination/casting operations?

You may calculate percent reduction using any of the methods in paragraphs (a) through (d) of this section.

(a) *Compliant line option.* If all of your wet-out areas have PTE that meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51, and all of your wet-out area organic HAP emissions and oven organic HAP emissions are vented to an add-on control device, use Equation 1 of this section to demonstrate compliance. In all other situations, use Equation 2 of this section to demonstrate compliance.

$$PR = \frac{(\text{Inlet}) - (\text{Outlet})}{(\text{Inlet})} \times 100 \qquad \text{(Eq. 1)}$$

Where:

PR=percent reduction;

Inlet+HAP emissions entering the control device, lbs per year;

Outlet=HAP emissions existing the control device to the atmosphere, lbs per year.

$$PR = \frac{(\text{WAE}_{ci} + O_{ci}) - (\text{WAE}_{co} + O_{co})}{(\text{WAE}_{ci} + \text{WAE}_{u} + \text{O}_{ci} + \text{O}_{u})} \times 100 \qquad \text{(Eq. 2)}$$

Where:

PR=percent reduction;

$WAEi_{ci}$=wet-out area organic HAP emissions, lbs per year, vented to a control device;

$WAEi_{u}$=wet-out area organic HAP emissions, lbs per year, not vented to a control device;

$Oj_{u}$=oven organic HAP emissions, lbs per year, not vented to a control device;

$Oj_{ci}$=oven organic HAP emissions, lbs per year, vented to a control device;

$WAEi_{co}$=wet-out area organic HAP emissions, lbs per year, from the control device outlet;

$Oj_{co}$=oven organic HAP emissions, lbs per year, from the control device outlet.

(b) *Averaging option.* Use Equation 3 of this section to calculate percent reduction.

$$PR = \frac{\left(\sum_{i=1}^{m} \mathrm{WAEi}_{\mathrm{ci}} + \sum_{j=1}^{n} Oj_{ci}\right) - \left(\sum_{i=1}^{m} \mathrm{WAEi}_{\mathrm{co}} + \sum_{j=1}^{n} Oj_{co}\right)}{\left(\sum_{i=1}^{m} \mathrm{WAEi}_{\mathrm{ci}} + \sum_{j=1}^{n} Oj_{ci} + \sum_{i=1}^{m} \mathrm{WAEi}_{\mathrm{u}} + \sum_{j=1}^{n} Oj_{u}\right)} \times 100 \qquad \text{(Eq. 3)}$$

Where:

PR=percent reduction;

$WAEi_{ci}$=wet-out area organic HAP emissions from wet-out area i, lbs per year, sent to a control device;

$WAEi_{u}$=wet-out area organic HAP emissions from wet-out area i, lbs per year, not sent to a control device;

$WAEi_{co}$=wet-out area organic HAP emissions from wet-out area i, lbs per year, at the outlet of a control device;

$Oj_{u}$=organic HAP emissions from oven j, lbs per year, not sent to a control device;

$Oj_{ci}$=organic HAP emissions from oven j, lbs per year, sent to a control device;

$Oj_{co}$=organic HAP emissions from oven j, lbs per year, at the outlet of the control device;

m=number of wet-out areas;

n=number of ovens.

(c) *Add-on control device option.* Use Equation 1 of this section to calculate percent reduction.

(d) *Combination option.* Use Equations 1 through 3 of this section, as applicable, to calculate percent reduction.

[70 FR 50127, Aug. 25, 2005]

**§ 63.5890 How do I calculate an organic HAP emissions factor to demonstrate compliance for continuous lamination/casting operations?**

(a) *Compliant line option.* Use Equation 1 of this section to calculate an organic HAP emissions factor in lbs/ton.

$$E = \frac{WAE_u + WAE_c + O_u + O_c}{(R + G)} \qquad (Eq.\ 1)$$

Where:

E=HAP emissions factor in lbs/ton of resin and gel coat

$WAE_u$=uncontrolled wet-out area organic HAP emissions, lbs per year

$WAE_c$=controlled wet-out area organic HAP emissions, lbs per year

$O_u$=uncontrolled oven organic HAP emissions, lbs per year

$O_c$=controlled oven organic HAP emissions, lbs per year

R=total usage of neat resin plus, tpy

G=total usage of neat gel coat plus, tpy

(b) *Averaging option.* Use Equation 2 of this section to demonstrate compliance.

$$E = \frac{\sum_{i=1}^{m} WAE_{ui} + \sum_{i=1}^{o} WAE_{ci} + \sum_{j=1}^{n} O_{uj} + \sum_{j=1}^{p} O_{cj}}{(R+G)} \qquad (Eq.\ 2)$$

Where:

E=HAP emissions factor in lbs/ton of resin and gel coat

$WAE_{ui}$=uncontrolled organic HAP emissions from wet-out area i, lbs per year

$WAE_{ci}$=controlled organic HAP emissions from wet-out area i, lbs per year

$O_{uj}$=uncontrolled organic HAP emissions from oven j, lbs per year

$O_{cj}$=controlled organic HAP emissions from oven j, lbs per year

i=number of wet-out areas

j=number of ovens

m=number of wet-out areas uncontrolled

n=number of ovens uncontrolled

o=number of wet-out areas controlled

p=number of ovens controlled

R=total usage of neat resin plus, tpy

G=total usage of neat gel coat plus, tpy

(c) *Combination option.* Use Equations 1 and 2 of this section, as applicable, to demonstrate compliance.

**Continuous Compliance Requirements**

## § 63.5895 How do I monitor and collect data to demonstrate continuous compliance?

(a) During production, you must collect and keep a record of data as indicated in 40 CFR part 63, subpart SS, if you are using an add-on control device.

(b) You must monitor and collect data as specified in paragraphs (b)(1) through (4) of this section.

(1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times that the affected source is operating.

(2) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes to this subpart, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(3) At all times, you must maintain necessary parts for routine repairs of the monitoring equipment.

(4) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring equipment to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if you are meeting any organic HAP emissions limits based on an organic HAP emissions limit in Tables 3 or 5 to this subpart. You must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if you are meeting any organic HAP content limits in Table 7 to this subpart if you are averaging organic HAP contents. Resin use records may be based on purchase records if you can reasonably estimate how the resin is applied. The organic HAP content records may be based on MSDS or on resin specifications supplied by the resin supplier.

(d) Resin and gel coat use records are not required for the individual resins and gel coats that are demonstrated, as applied, to meet their applicable emission as defined in §63.5810(a). However, you must retain the records of resin and gel coat organic HAP content, and you must include the list of these resins and gel coats and identify their application methods in your semiannual compliance reports. If after you have initially demonstrated that a specific combination of an individual resin or gel coat, application method, and controls meets its applicable emission limit, and the resin or gel coat changes or the organic HAP content increases, or you change the application method or controls, then you again must demonstrate that the individual resin or gel coat meets its emission limit as specified in paragraph (a) of §63.5810. If any of the previously mentioned changes results in a situation where an individual resin or gel coat now exceeds its applicable emission limit in Table 3 or 5 of this subpart, you must begin collecting resin and gel coat use records and calculate compliance using one of the averaging options on a 12-month rolling average.

(e) For each of your pultrusion machines, you must record all times that wet area enclosures doors or covers are open and there is resin present in the resin bath.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50128, Aug. 25, 2005]

## § 63.5900 How do I demonstrate continuous compliance with the standards?

(a) You must demonstrate continuous compliance with each standard in §63.5805 that applies to you according to the methods specified in paragraphs (a)(1) through (3) of this section.

(1) Compliance with organic HAP emissions limits for sources using add-on control devices is demonstrated following the procedures in 40 CFR part 63, subpart SS. Sources using add-on controls may also use continuous emissions monitors to demonstrate continuous compliance as an alternative to control parameter monitoring.

(2) Compliance with organic HAP emissions limits is demonstrated by maintaining an organic HAP emissions factor value less than or equal to the appropriate organic HAP emissions limit listed in Table 3 or 5 to this subpart, on a 12-month rolling average, and/or by including in each compliance report a statement that individual resins and gel coats, as applied, meet the appropriate organic HAP emissions limits, as discussed in §63.5895(d).

(3) Compliance with organic HAP content limits in Table 7 to this subpart is demonstrated by maintaining an average organic HAP content value less than or equal to the appropriate organic HAP contents listed in Table 7 to this subpart, on a 12-month rolling average, and/or by including in each compliance report a statement that resins and gel coats individually meet the appropriate organic HAP content limits in Table 7 to this subpart, as discussed in §63.5895(d).

(4) Compliance with the work practice standards in Table 4 to this subpart is demonstrated by performing the work practice required for your operation.

(b) You must report each deviation from each standard in §63.5805 that applies to you. The deviations must be reported according to the requirements in §63.5910.

(c) Except as provided in paragraph (d) of this section, during periods of startup, shutdown or malfunction, you must meet the organic HAP emissions limits and work practice standards that apply to you.

(d) When you use an add-on control device to meet standards in §63.5805, you are not required to meet those standards during periods of startup, shutdown, or malfunction, but you must operate your affected source to minimize emissions in accordance with §63.6(e)(1).

(e) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of malfunction for those affected sources and standards specified in paragraph (d) of this section are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, and malfunction are violations, according to the provisions in §63.6(e).

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50128, Aug. 25, 2005; 71 FR 20466, Apr. 20, 2006]

## Notifications, Reports, and Records

### § 63.5905 What notifications must I submit and when?

(a) You must submit all of the notifications in Table 13 to this subpart that apply to you by the dates specified in Table 13 to this subpart. The notifications are described more fully in 40 CFR part 63, subpart A, referenced in Table 13 to this subpart.

(b) If you change any information submitted in any notification, you must submit the changes in writing to the Administrator within 15 calendar days after the change.

### § 63.5910 What reports must I submit and when?

(a) You must submit each report in Table 14 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date specified in Table 14 to this subpart and according to paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.5800 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.5800.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.5800.

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

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting requirements pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to §70.6 (a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

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

(1) Company name and address.

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

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

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there are no deviations from any organic HAP emissions limitations (emissions limit and operating limit) that apply to you, and there are no deviations from the requirements for work practice standards in Table 4 to this subpart, a statement that there were no deviations from the organic HAP emissions limitations or work practice standards during the reporting period.

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

(d) For each deviation from an organic HAP emissions limitation ( *i.e.,* emissions limit and operating limit) and for each deviation from the requirements for work practice standards that occurs at an affected source where you are not using a CMS to comply with the organic HAP emissions limitations or work practice standards in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (4) of this section and in paragraphs (d)(1) and (2) of this section. This includes periods of startup, shutdown, and malfunction.

(1) The total operating time of each affected source during the reporting period.

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

(e) For each deviation from an organic HAP emissions limitation ( *i.e.,* emissions limit and operating limit) occurring at an affected source where you are using a CMS to comply with the organic HAP emissions limitation in this subpart, you must include the information in paragraphs (c)(1) through (4) of this section and in paragraphs (e)(1) through (12) of this section. This includes periods of startup, shutdown, and malfunction.

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

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

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

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

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

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

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

(8) An identification of each organic HAP that was monitored at the affected source.

(9) A brief description of the process units.

(10) A brief description of the CMS.

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

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

(f) You must report if you have exceeded the 100 tpy organic HAP emissions threshold if that exceedance would make your facility subject to §63.5805(a)(1) or (d). Include with this report any request for an exemption under §63.5805(e). If you receive an exemption under §63.5805(e) and subsequently exceed the 100 tpy organic HAP emissions threshold, you must report this exceedance as required in §63.5805(f).

(g) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 14 to this subpart along with, or as part of, the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any organic HAP emissions limitation (including any operating limit) or work practice requirement in this subpart, submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(h) Submit compliance reports and startup, shutdown, and malfunction reports based on the requirements in table 14 to this subpart, and not based on the requirements in §63.999.

(i) Where multiple compliance options are available, you must state in your next compliance report if you have changed compliance options since your last compliance report.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50128, Aug. 25, 2005]

### § 63.5915 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (3) of this section.

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

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

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

(b) If you use an add-on control device, you must keep all records required in 40 CFR part 63, subpart SS, to show continuous compliance with this subpart.

(c) You must keep all data, assumptions, and calculations used to determine organic HAP emissions factors or average organic HAP contents for operations listed in tables 3, 5, and 7 to this subpart.

(d) You must keep a certified statement that you are in compliance with the work practice requirements in Table 4 to this subpart, as applicable.

(e) For a new or existing continuous lamination/ casting operation, you must keep the records listed in paragraphs (e)(1) through (4) of this section, when complying with the percent reduction and/or lbs/ton requirements specified in paragraphs (a) and (c) through (d) of §63.5805.

(1) You must keep all data, assumptions, and calculations used to determine percent reduction and/or lbs/ton as applicable;

(2) You must keep a brief description of the rationale for the assignment of an equation or factor to each formula;

(3) When using facility-specific organic HAP emissions estimation equations or factors, you must keep all data, assumptions, and calculations used to derive the organic HAP emissions estimation equations and factors and identification and rationale for the worst-case formula; and

(4) For all organic HAP emissions estimation equations and organic HAP emissions factors, you must keep documentation that the appropriate permitting authority has approved them.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50129, Aug. 25, 2005]

### § 63.5920 In what form and how long must I keep my records?

(a) You must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

(d) You may keep records in hard copy or computer readable form including, but not limited to, paper, microfilm, computer floppy disk, magnetic tape, or microfiche.

## Other Requirements and Information

## § 63.5925 What parts of the General Provisions apply to me?

Table 15 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

## § 63.5930 Who implements and enforces this subpart?

(a) This subpart can be administered by us, the EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to administer and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are not delegated.

(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 organic HAP emissions standards in §63.5805 under §63.6(g).

(2) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

## § 63.5935 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:

*Atomized mechanical application* means application of resin or gel coat with spray equipment that separates the liquid into a fine mist. This fine mist may be created by forcing the liquid under high pressure through an elliptical orifice, bombarding a liquid stream with directed air jets, or a combination of these techniques.

*Bulk molding compound (BMC)* means a putty-like molding compound containing resin(s) in a form that is ready to mold. In addition to resins, BMC may contain catalysts, fillers, and reinforcements. Bulk molding compound can be used in compression molding and injection molding operations to manufacture reinforced plastic composites products.

*BMC manufacturing* means a process that involves the preparation of BMC.

*Centrifugal casting* means a process for fabricating cylindrical composites, such as pipes, in which composite materials are positioned inside a rotating hollow mandrel and held in place by centrifugal forces until the part is sufficiently cured to maintain its physical shape.

*Charge* means the amount of SMC or BMC that is placed into a compression or injection mold necessary to complete one mold cycle.

*Cleaning* means removal of composite materials, such as cured and uncured resin from equipment, finished surfaces, floors, hands of employees, or any other surfaces.

*Clear production gel coat* means an unpigmented, quick-setting resin used to improve the surface appearance and/or performance of composites. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

*Closed molding* means a grouping of processes for fabricating composites in a way that HAP-containing materials are not exposed to the atmosphere except during the material loading stage ( *e.g.,* compression molding, injection molding, and resin transfer molding). Processes where the mold is covered with plastic (or equivalent material) prior to resin application, and the resin is injected into the covered mold are also considered closed molding.

*Composite* means a shaped and cured part produced by using composite materials.

*Composite materials* means the raw materials used to make composites. The raw materials include styrene containing resins. They may also include gel coat, monomer, catalyst, pigment, filler, and reinforcement.

*Compression molding* means a closed molding process for fabricating composites in which composite materials are placed inside matched dies that are used to cure the materials under heat and pressure without exposure to the atmosphere. The addition of mold paste or in-mold coating is considered part of the closed molding process. The composite materials used in this process are generally SMC or BMC.

*Compression/injection molding* means a grouping of processes that involves the use of compression molding and/or injection molding.

*Continuous casting* means a continuous process for fabricating composites in which composite materials are placed on an in-line conveyor belt to produce cast sheets that are cured in an oven.

*Continuous lamination* means a continuous process for fabricating composites in which composite materials are typically sandwiched between plastic films, pulled through compaction rollers, and cured in an oven. This process is generally used to produce flat or corrugated products on an in-line conveyor.

*Continuous lamination/casting* means a grouping of processes that involves the use of continuous lamination and/or continuous casting.

*Controlled emissions* means those organic HAP emissions that are vented from a control device to the atmosphere.

*Corrosion-resistant gel coat* means a gel coat used on a product made with a corrosion-resistant resin that has a corrosion-resistant end-use application.

*Corrosion-resistant end-use applications* means applications where the product is manufactured specifically for an application that requires a level of chemical inertness or resistance to chemical attack above that required for typical reinforced plastic composites products. These applications include, but are not limited to, chemical processing and storage; pulp and paper production; sewer and wastewater treatment; power generation; potable water transfer and storage; food and drug processing; pollution or odor control; metals production and plating; semiconductor manufacturing; petroleum production, refining, and storage; mining; textile production; nuclear materials storage; swimming pools; and cosmetic production, as well as end-use applications that require high strength resins.

*Corrosion-resistant industry standard* includes the following standards: ASME RTP–1 or Sect. X; ASTM D5364, D3299, D4097, D2996, D2997, D3262, D3517, D3754, D3840, D4024, D4160, D4161, D4162, D4184, D3982, or D3839; ANSI/AWWA C950; UL 215, 1316 or 1746, IAPMO PS–199, or written customer requirements for resistance to specified chemical environments.

*Corrosion-resistant product* means a product made with a corrosion-resistant resin and is manufactured to a corrosion-resistant industry standard, or a food contact industry standard, or is manufactured for corrosion-resistant end-use applications involving continuous or temporary chemical exposures.

*Corrosion-resistant resin* means a resin that either:

(1) Displays substantial retention of mechanical properties when undergoing ASTM C–581 coupon testing, where the resin is exposed for 6 months or more to one of the following materials: Material with a pH ≥ 12.0

or ≤ 3.0, oxidizing or reducing agents, organic solvents, or fuels or additives as defined in 40 CFR 79.2. In the coupon testing, the exposed resin needs to demonstrate a minimum of 50 percent retention of the relevant mechanical property compared to the same resin in unexposed condition. In addition, the exposed resin needs to demonstrate an increased retention of the relevant mechanical property of at least 20 percentage points when compared to a similarly exposed general-purpose resin. For example, if the general-purpose resin retains 45 percent of the relevant property when tested as specified above, then a corrosion-resistant resin needs to retain at least 65 percent (45 percent plus 20 percent) of its property. The general-purpose resin used in the test needs to have an average molecular weight of greater than 1,000, be formulated with a 1:2 ratio of maleic anhydride to phthalic anhydride and 100 percent diethylene glycol, and a styrene content between 43 to 48 percent; or

(2) Complies with industry standards that require specific exposure testing to corrosive media, such as UL 1316, UL 1746, or ASTM F–1216.

*Doctor box* means the box or trough on an SMC machine into which the liquid resin paste is delivered before it is metered onto the carrier film.

*Filament application* means an open molding process for fabricating composites in which reinforcements are fed through a resin bath and wound onto a rotating mandrel. The materials on the mandrel may be rolled out or worked by using nonmechanical tools prior to curing. Resin application to the reinforcement on the mandrel by means other than the resin bath, such as spray guns, pressure-fed rollers, flow coaters, or brushes is not considered filament application.

*Filled Resin* means that fillers have been added to a resin such that the amount of inert substances is at least 10 percent by weight of the total resin plus filler mixture. Filler putty made from a resin is considered a filled resin.

*Fillers* means inert substances dispersed throughout a resin, such as calcium carbonate, alumina trihydrate, hydrous aluminum silicate, mica, feldspar, wollastonite, silica, and talc. Materials that are not considered to be fillers are glass fibers or any type of reinforcement and microspheres.

*Fire retardant gel coat* means a gel coat used for products for which low-flame spread/low-smoke resin is used.

*Fluid impingement technology* means a spray gun that produces an expanding non-misting curtain of liquid by the impingement of low-pressure uninterrupted liquid streams.

*Food contact industry standard* means a standard related to food contact application contained in Food and Drug Administration's regulations at 21 CFR 177.2420.

*Gel Coat* means a quick-setting resin used to improve surface appearance and/or performance of composites. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

*Gel coat application* means a process where either clear production, pigmented production, white/off-white or tooling gel coat is applied.

*HAP-containing materials storage* means an ancillary process which involves keeping HAP-containing materials, such as resins, gel coats, catalysts, monomers, and cleaners, in containers or bulk storage tanks for any length of time. Containers may include small tanks, totes, vessels, and buckets.

*High Performance gel coat* means a gel coat used on products for which National Sanitation Foundation, United States Department of Agriculture, ASTM, durability, or other property testing is required.

*High strength gel coat* means a gel coat applied to a product that requires high strength resin.

*High strength resins* means polyester resins which have a casting tensile strength of 10,000 pounds per square inch or more and which are used for manufacturing products that have high strength requirements such as structural members and utility poles.

*Injection molding* means a closed molding process for fabricating composites in which composite materials are injected under pressure into a heated mold cavity that represents the exact shape of the product. The composite materials are cured in the heated mold cavity.

*Low Flame Spread/Low Smoke Products* means products that meet the following requirements. The products must meet both the applicable flame spread requirements and the applicable smoke requirements. Interior or exterior building application products must meet an ASTM E–84 Flame Spread Index of less than or equal to 25, and Smoke Developed Index of less than or equal to 450, or pass National Fire Protection Association 286 Room Corner Burn Test with no flash over and total smoke released not exceeding 1000 meters square. Mass transit application products must meet an ASTM E–162 Flame Spread Index of less than or equal to 35 and ASTM E662 Smoke Density Ds @ 1.5 minutes less than or equal to 100 and Ds @ 4 minutes less than to equal to 200. Duct application products must meet ASTM E084 Flame Spread Index less than or equal to 25 and Smoke Developed Index less than or equal to 50 on the interior and/or exterior of the duct.

*Manual resin application* means an open molding process for fabricating composites in which composite materials are applied to the mold by pouring or by using hands and nonmechanical tools, such as brushes and rollers. Materials are rolled out or worked by using nonmechanical tools prior to curing. The use of pressure-fed rollers and flow coaters to apply resin is not considered manual resin application.

*Mechanical resin application* means an open molding process for fabricating composites in which composite materials (except gel coat) are applied to the mold by using mechanical tools such as spray guns, pressure-fed rollers, and flow coaters. Materials are rolled out or worked by using nonmechanical tools prior to curing.

*Mixing* means the blending or agitation of any HAP-containing materials in vessels that are 5.00 gallons (18.9 liters) or larger, and includes the mixing of putties or polyputties. Mixing may involve the blending of resin, gel coat, filler, reinforcement, pigments, catalysts, monomers, and any other additives.

*Mold* means a cavity or matrix into or onto which the composite materials are placed and from which the product takes its form.

*Neat gel coat* means the resin as purchased for the supplier, but not including any inert fillers.

*Neat gel coat plus* means neat gel coat plus any organic HAP-containing materials that are added to the gel coat by the supplier or the facility, excluding catalysts and promoters. Neat gel coat plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

*Neat resin* means the resin as purchased from the supplier, but not including any inert fillers.

*Neat resin plus* means neat resin plus any organic HAP-containing materials that are added to the resin by the supplier or the facility. Neat resin plus does not include any added filler, reinforcements, catalysts, or promoters. Neat resin plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

*Nonatomized mechanical application* means the use of application tools other than brushes to apply resin and gel coat where the application tool has documentation provided by its manufacturer or user that this design of the application tool has been organic HAP emissions tested, and the test results showed that use of this application tool results in organic HAP emissions that are no greater than the organic HAP emissions predicted by the applicable nonatomized application equation(s) in Table 1 to this subpart. In addition, the device must be operated according to the manufacturer's directions, including instructions to prevent the operation of the device at excessive spray pressures. Examples of nonatomized application include flow coaters, pressure fed rollers, and fluid impingement spray guns.

*Noncorrosion-resistant resin* means any resin other than a corrosion-resistant resin or a tooling resin.

*Noncorrosion-resistant product* means any product other than a corrosion-resistant product or a mold.

*Non-routine manufacture* means that you manufacture parts to replace worn or damaged parts of a reinforced plastic composites product, or a product containing reinforced plastic composite parts, that was originally manufactured in another facility. For a part to qualify as non-routine manufacture, it must be used for repair or replacement, and the manufacturing schedule must be based on the current or anticipated repair needs of the reinforced plastic composites product, or a product containing reinforced plastic composite parts.

*Operation* means a specific process typically found at a reinforced plastic composites facility. Examples of operations are noncorrosion-resistant manual resin application, corrosion-resistant mechanical resin application, pigmented gel coat application, mixing and HAP-containing materials storage.

*Operation group* means a grouping of individual operations based primarily on mold type. Examples are open molding, closed molding, and centrifugal casting.

*Open molding* means a process for fabricating composites in a way that HAP-containing materials are exposed to the atmosphere. Open molding includes processes such as manual resin application, mechanical resin application, filament application, and gel coat application. Open molding also includes application of resins and gel coats to parts that have been removed from the open mold.

*Pigmented gel coat* means a gel coat that has a color, but does not contain 10 percent of more titanium dioxide by weight. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

*Polymer casting* means a process for fabricating composites in which composite materials are ejected from a casting machine or poured into an open, partially open, or closed mold and cured. After the composite materials are poured into the mold, they are not rolled out or worked while the mold is open, except for smoothing the material and/or vibrating the mold to remove bubbles. The composite materials may or may not include reinforcements. Products produced by the polymer casting process include cultured marble products and polymer concrete.

*Preform Injection* means a form of pultrusion where liquid resin is injected to saturate reinforcements in an enclosed system containing one or more chambers with openings only large enough to admit reinforcements. Resin, which drips out of the chamber(s) during the process, is collected in closed piping or covered troughs and then into a covered reservoir for recycle. Resin storage vessels, reservoirs, transfer systems, and collection systems are covered or shielded from the ambient air. Preform injection differs from direct die injection in that the injection chambers are not directly attached to the die.

*Prepreg materials* means reinforcing fabric received precoated with resin which is usually cured through the addition of heat.

*Pultrusion* means a continuous process for manufacturing composites that have a uniform cross-sectional shape. The process consists of pulling a fiber-reinforcing material through a resin impregnation chamber or bath and through a shaping die, where the resin is subsequently cured. There are several types of pultrusion equipment, such as open bath, resin injection, and direct die injection equipment.

*Repair* means application of resin or gel coat to a part to correct a defect, where the resin or gel coat application occurs after the part has gone through all the steps of its typical production process, or the application occurs outside the normal production area. For purposes of this subpart, rerouting a part back through the normal production line, or part of the normal production line, is not considered repair.

*Resin transfer molding* means a process for manufacturing composites whereby catalyzed resin is transferred or injected into a closed mold in which fiberglass reinforcement has been placed.

*Sheet molding compound (SMC)* means a ready-to-mold putty-like molding compound that contains resin(s) processed into sheet form. The molding compound is sandwiched between a top and a bottom film. In addition to resin(s), it may also contain catalysts, fillers, chemical thickeners, mold release agents,

reinforcements, and other ingredients. Sheet molding compound can be used in compression molding to manufacture reinforced plastic composites products.

*Shrinkage controlled resin* means a resin that when promoted, catalyzed, and filled according to the resin manufacturer's recommendations demonstrates less than 0.3 percent linear shrinkage when tested according to ASTM D2566.

*SMC manufacturing* means a process which involves the preparation of SMC.

*Tooling gel coat* means a gel coat that is used to form the surface layer of molds. Tooling gel coats generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

*Tooling resin* means a resin that is used to produce molds. Tooling resins generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

*Uncontrolled oven organic HAP emissions* means those organic HAP emissions emitted from the oven through closed vent systems to the atmosphere and not to a control device. These organic HAP emissions do not include organic HAP emissions that may escape into the workplace through the opening of panels or doors on the ovens or other similar fugitive organic HAP emissions in the workplace.

*Uncontrolled wet-out area organic HAP emissions* means any or all of the following: Organic HAP emissions from wet-out areas that do not have any capture and control, organic HAP emissions that escape from wet-out area enclosures, and organic HAP emissions from wet-out areas that are captured by an enclosure but are vented to the atmosphere and not to an add-on control device.

*Unfilled* means that there has been no addition of fillers to a resin or that less than 10 percent of fillers by weight of the total resin plus filler mixture has been added.

*Vapor suppressant* means an additive, typically a wax, that migrates to the surface of the resin during curing and forms a barrier to seal in the styrene and reduce styrene emissions.

*Vapor-suppressed resin* means a resin containing a vapor suppressant added for the purpose of reducing styrene emissions during curing.

*White and off-white gel coat* means a gel coat that contains 10 percent of more titanium dioxide by weight.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50129, Aug. 25, 2005]

## Table 1 to Subpart WWWW of Part 63—Equations To Calculate Organic HAP Emissions Factors for Specific Open Molding and Centrifugal Casting Process Streams

**Table 1 to Subpart WWWW of Part 63--Equations to Calculate Organic HAP Emissions Factors for Specific Open Molding and Centrifugal Casting Process Streams[1]**

As specified in §63.5810, use the equations in the following table to calculate organic HAP emissions factors for specific open molding and centrifugal casting process streams:

| If your operation type is a new or existing... | And you use... | With... | Use this organic HAP Emissions Factor (EF) Equation for materials with less than 33 percent organic HAP (19 percent organic HAP for nonatomized gel coat)[2,3,4]... | Use this organic HAP emissions Factor (EF) Equation for materials with 33 percent or more organic HAP (19 percent for nonatomized gel coat)[2,3,4]... |
|---|---|---|---|---|
| 1. open molding operation | a. manual resin application | i. nonvapor-suppressed resin | EF = 0.126 x %HAP x 2000 | EF = ((0.286 x %HAP)-0.0529) x 2000 |
| | | ii. vapor-suppressed resin | EF = 0.126 x %HAP x 2000 x (1-(0.5 x VSE factor)) | EF = ((0.286 x %HAP)-0.0529) x 2000 x (1-(0.5 x VSE factor)) |
| | | iii. vacuum bagging/closed-mold curing with roll out | EF = 0.126 x %HAP x 2000 x 0.8 | EF = ((0.286 x %HAP)-0.0529) x 2000 x 0.8 |
| | | iv. vacuum bagging/closed-mold curing without roll-out | EF = (0.126 x %HAP x 2000 x 0.5 | EF = ((0.286 x %HAP)-0.0529) x 2000 x 0.5 |
| | b. atomized mechanical resin application | i. nonvapor-suppressed resin | EF = 0.169 x %HAP x 2000 | EF = ((0.714 x %HAP)-0.18) x 2000 |
| | | ii. vapor-suppressed resin | EF = 0.169 x %HAP x 2000 x (1-(0.45 x VSE factor)) | EF = ((0.714 x %HAP)-0.18) x 2000 x (1-(0.45 x VSE factor)) |
| | | iii. vacuum bagging/closed-mold curing with roll-out | EF = 0.169 x %HAP x 2000 x 0.85 | EF = ((0.714 x %HAP)-0.18) x 2000 x 0.85 |
| | | iv. vacuum bagging/closed-mold curing without roll-out | EF = 0.169 x %HAP x 2000 x 0.55 | EF = ((0.714 x %HAP)-0.18) x 2000 x 0.55 |
| | c. nonatomized mechanical resin application | i. nonvapor-suppressed resin | EF = 0.107 x %HAP x 2000 | EF = ((0.157 x %HAP)-0.0165) x 2000 |
| | | ii. vapor-suppressed resin | EF = 0.107 x %HAP x 2000 x (1-(0.45 x VSE factor)) | EF = ((0.157 x %HAP)-0.0165) x 2000 x (1-(0.45 x VSE factor)) |
| | | iii. closed-mold curing with roll-out | EF = 0.107 x %HAP x 2000 x 0.85 | EF = ((0.157 x %HAP)-0.0165) x 2000 x 0.85 |
| | | iv. vacuum bagging/closed-mold curing without roll-out | EF = 0.107 x %HAP x 2000 x 0.55 | EF = ((0.157 x %HAP)-0.0165) x 2000 x 0.55 |
| | d. atomized mechanical resin application with robotic or automated spray control[5] | nonvapor-suppressed resin | EF = 0.169 x %HAP x 2000 x 0.77 | EF = 0.77 x ((0.714 x %HAP)-0.18) x 2000 |
| | e. filament application[6] | i. nonvapor-suppressed resin | EF = 0.184 x %HAP x 2000 | EF = ((0.2746 x %HAP)-0.0298) x 2000 |
| | | ii. vapor-suppressed resin | EF = 0.12 x %HAP x 2000 | EF = ((0.2746 x %HAP)-0.0298) x 2000 x 0.65 |
| | f. atomized spray gel coat application | nonvapor-suppressed gel coat | EF = 0.445 x %HAP x 2000 | EF = ((1.03646 x %HAP)-0.195) x 2000 |

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| | | | | |
|---|---|---|---|---|
| | g. nonatomized spray gel coat application | nonvapor-suppressed gel coat | EF = 0.185 x %HAP x 2000 | EF = ((0.4506 x %HAP)-0.0505) x 2000 |
| | h. atomized spray gel coat application using robotic or automated spray | nonvapor-suppressed gel coat | EF = 0.445 x %HAP x 2000 x 0.73 | EF = ((1.03646 x %HAP)-0.195) x 2000 x 0.73 |
| 2. centrifugal casting operations [7,8] | a. heated air blown through molds | nonvapor-suppressed resin | EF = 0.558 x (%HAP) x 2000 | EF = 0.558 x (%HAP) x 2000 |
| | b. vented molds, but air vented through the molds is not heated | nonvapor-suppressed resin | EF = 0.026 x (%HAP) x 2000 | EF = 0.026 x (%HAP) x 2000 |

**Footnotes to Table 1**

[1] The equations in this table are intended for use in calculating emission factors to demonstrate compliance with the emission limits in subpart WWWW. These equations may not be the most appropriate method to calculate emission estimates for other purposes. However, this does not preclude a facilit from using the equations in this table to calculate emission factors for purposes other then rule compliance if these equations are the most accurate available.

[2] To obtain the organic HAP emissions factor value for an operation with an add-on control device multiply the EF above by the add-on control factor calculated using Equation 1 of §63.5810. The organic HAP emissions factors have units of lbs of organic HAP per ton of resin or gel coat applied.

[3] Percent HAP means total weight percent of organic HAP (styrene, methyl methacrylate, and any other organic HAP) in the resin or gel coat prior to the addition of fillers, catalyst, and promoters. Input the percent HAP as a decimal, i.e., 33 percent HAP should be input as 0.33, not 33.

[4] The VSE factor means the percent reduction in organic HAP emissions expressed as a decimal measured by the VSE test method of appendix A to this subpart.

[5] This equation is based on a organic HAP emissions factor equation developed for mechanical atomized controlled spray. It may only be used for automated or robotic spray systems with atomized spray. All spray operations using hand held spray guns must use the appropriate mechanical atomized or mechanical nonatomized organic HAP emissions factor equation. Automated or robotic spray systems using nonatomized spray should use the appropriate nonatomized mechanical resin application equation.

[6] Applies only to filament application using an open resin bath. If resin is applied manually or with a spray gun, use the appropriate manual or mechanical application organic HAP emissions factor equation.

[7] These equations are for centrifugal casting operations where the mold is vented during spinning. Centrifugal casting operations where the mold is completely sealed after resin injection are considered to be closed molding operations.

[8] If a centrifugal casting operation uses mechanical or manual resin application techniques to apply resin to an open centrifugal casting mold, use the appropriate open molding equation with covered cure and no rollout to determine an emission factor for operations prior to the closing of the centrifugal casting mold. If the closed centrifugal casting mold is vented during spinning, use the appropriate centrifugal casting equation to calculate an emission factor for the portion of the process where spinning and cure occur. If a centrifugal casting operation uses mechanical or manual resin application techniques to apply resin to an open centrifugal casting mold, and the mold is then closed and is not vented, treat the entire operation as open molding with covered cure and no rollout to determine emission factors.

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[70 FR 50129, Aug. 26, 2005]

**Table 2 to Subpart WWWW of Part 63—Compliance Dates for New and Existing Reinforced Plastic Composites Facilities**

As required in §§63.5800 and 63.5840 you must demonstrate compliance with the standards by the dates in the following table:

| If your facility is . . . | And . . . | Then you must comply by this date . . . |
|---|---|---|
| 1. An existing source | a. Is a major source on or before the publication date of this subpart | i. April 21, 2006, or<br>ii. You must accept and meet an enforceable HAP emissions limit below the major source threshold prior to April 21, 2006. |
| 2. An existing source that is an area source | Becomes a major source after the publication date of this subpart | 3 years after becoming a major source or April 21, 2006, whichever is later. |
| 3. An existing source, and emits less than 100 tpy of organic HAP from the combination of all centrifugal casting and continuous lamination/casting operations at the time of initial compliance with this subpart | Subsequently increases its actual organic HAP emissions to 100 tpy or more from these operations, which requires that the facility must now comply with the standards in §63.5805(b) | 3 years of the date your semi-annual compliance report indicates your facility meets or exceeds the 100 tpy threshold. |
| 4. A new source | Is a major source at startup | Upon startup or April 21, 2003, whichever is later. |
| 5. A new source | Is an area source at startup and becomes a major source | Immediately upon becoming a major source. |
| 6. A new source, and emits less than 100 tpy of organic HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC and BMC manufacturing, and mixing operations at the time of initial compliance with this subpart | Subsequently increases its actual organic HAP emissions to 100 tpy or more from the combination of these operations, which requires that the facility must now meet the standards in §63.5805(d) | 3 years from the date that your semi-annual compliance report indicates your facility meets or exceeds the 100 tpy threshold. |

**Table 3 to Subpart WWWW of Part 63—Organic HAP Emissions Limits for Existing Open Molding Sources, New Open Molding Sources Emitting Less Than 100 TPY of HAP, and New and Existing Centrifugal Casting and Continuous Lamination/Casting Sources that Emit Less Than 100 TPY of HAP**

As specified in §63.5805, you must meet the following organic HAP emissions limits that apply to you:

| If your operation type is . . . | And you use . . . | [1]Your organic HAP emissions limit is . . . |
|---|---|---|
| 1. open molding— | a. mechanical resin | 113 lb/ton. |

| | | |
|---|---|---|
| corrosion-resistant and/or high strength (CR/HS) | application<br>b. filament application<br>c. manual resin application | 171 lb/ton.<br>123 lb/ton. |
| 2. open molding—non-CR/HS | a. mechanical resin application<br>b. filament application<br>c. manual resin application | 88 lb/ton.<br>188 lb/ton.<br>87 lb/ton. |
| 3. open molding—tooling | a. mechanical resin application<br>b. manual resin application | 254 lb/ton.<br>157 lb/ton. |
| 4. open molding—low-flame spread/low-smoke products | a. mechanical resin application<br>b. filament application<br>c. manual resin application | 497 lb/ton.<br>270 lb/ton.<br>238 lb/ton. |
| 5. open molding—shrinkage controlled resins[2] | a. mechanical resin application<br>b. filament application<br>c. manual resin application | 354 lb/ton.<br>215 lb/ton.<br>180 lb/ton. |
| 6. open molding—gel coat[3] | a. tooling gel coating<br>b. white/off white pigmented gel coating<br>c. all other pigmented gel coating<br>d. CR/HS or high performance gel coat<br>e. fire retardant gel coat<br>f. clear production gel coat | 440 lb/ton.<br>267 lb/ton.<br>377 lb/ton.<br>605 lb/ton.<br>854 lb/ton.<br>522 lb/ton. |
| 7. centrifugal casting—CR/HS | a. resin application with the mold closed, and the mold is vented during spinning and cure<br>b. resin application with the mold closed, and the mold is not vented during spinning and cure<br>c. resin application with the mold open, and the mold is vented during spinning and cure<br>d. resin application with the mold open, and the mold is not vented during spinning and cure | 25 lb/ton.[4]<br>NA—this is considered to be a closed molding operation.<br>25 lb/ton.[4]<br>Use the appropriate open molding emission limit.[5] |
| 8. centrifugal casting—non-CR/HS | a. resin application with the mold closed, and the mold is vented during spinning and cure<br>b. resin application with | 20 lb/ton.[4]<br>NA—this is considered to be a closed molding operation.<br>20 lb/ton.[4]<br>Use the appropriate open molding |

| | | |
|---|---|---|
| | the mold closed, and mold is not vented during the spinning and cure<br>c. resin application with the mold open, and the mold is vented during spinning and cure<br>d. resin application with the mold open, and the mold is not vented during spinning and cure | emission limit.[5] |
| 9. pultrusion[6] | N/A | reduce total organic HAP emissions by at least 60 weight percent. |
| 10. continuous lamination/casting | N/A | reduce total organic HAP emissions by at least 58.5 weight percent or not exceed an organic HAP emissions limit of 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus. |

[1]Organic HAP emissions limits for open molding and centrifugal casting are expressed as lb/ton. You must be at or below these values based on a 12-month rolling average.

[2]This emission limit applies regardless of whether the shrinkage controlled resin is used as a production resin or a tooling resin.

[3]If you only apply gel coat with manual application, for compliance purposes treat the gel coat as if it were applied using atomized spray guns to determine both emission limits and emission factors. If you use multiple application methods and any portion of a specific gel coat is applied using nonatomized spray, you may use the nonatomized spray gel coat equation to calculate an emission factor for the manually applied portion of that gel coat. Otherwise, use the atomized spray gel coat application equation to calculate emission factors.

[4]For compliance purposes, calculate your emission factor using only the appropriate centrifugal casting equation in item 2 of Table 1 to this subpart, or a site specific emission factor for after the mold is closed as discussed in §63.5796.

[5]Calculate your emission factor using the appropriate open molding covered cure emission factor in item 1 of Table 1 to this subpart, or a site specific emission factor as discussed in §63.5796.

[6]Pultrusion machines that produce parts that meet the following criteria: 1,000 or more reinforcements or the glass equivalent of 1,000 ends of 113 yield roving or more; and have a cross sectional area of 60 square inches or more are not subject to this requirement. Their requirement is the work practice of air flow management which is described in Table 4 to this subpart.

[70 FR 50131, Aug. 25, 2005]

### Table 4 to Subpart WWWW of Part 63—Work Practice Standards

As specified in §63.5805, you must meet the work practice standards in the following table that apply to you:

| For ... | You must ... |
|---|---|
| 1. a new or existing closed molding operation | uncover, unwrap or expose only one charge per |

| | |
|---|---|
| using compression/injection molding | mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting. |
| 2. a new or existing cleaning operation | not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin. |
| 3. a new or existing materials HAP-containing materials storage operation | keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety. |
| 4. an existing or new SMC manufacturing operation | close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open. |
| 5. an existing or new SMC manufacturing operation | use a nylon containing film to enclose SMC. |
| 6. all mixing or BMC manufacturing operations[1] | use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. |
| 7. all mixing or BMC manufacturing operations[1] | close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. Vents routed to a 95 percent efficient control device are exempt from this requirement. |
| 8. all mixing or BMC manufacturing operations[1] | keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels. |
| 9. a new or existing pultrusion operation manufacturing parts that meet the following criteria: 1,000 or more reinforcements or the glass equivalent of 1,000 ends of 113 yield roving or more; and have a cross sectional area of 60 square inches or more that is not subject to the 95 percent organic HAP emission reduction requirement | i. not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s),<br>ii. not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device,<br>iii. use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across the wet-out area(s), |

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| | iv. direct any compressed air exhausts away from resin and wet-out area(s), |
| | v. convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air,<br>vi. cover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled, and<br>vii. cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical. |

[1]Containers of 5 gallons or less may be open when active mixing is taking place, or during periods when they are in process (i.e., they are actively being used to apply resin). For polymer casting mixing operations, containers with a surface area of 500 square inches or less may be open while active mixing is taking place.

[70 FR 50133, Aug. 25, 2005]

**Alternative Organic HAP Emissions Limits for Open Molding, Centrifugal Casting, and SMC Manufacturing Operations Where the Standards Are Based on a 95 Percent Reduction Requirement**

As specified in §63.5805, as an alternative to the 95 percent organic HAP emissions reductions requirement, you may meet the appropriate organic HAP emissions limits in the following table:

| If your operation type is . . . | And you use . . . | LYour organic HAP emissions limit is a[1]. . . |
|---|---|---|
| 1. Open molding—corrosion-resistant and/or high strength (CR/HS) | a. Mechanical resin application | 6 lb/ton. |
| | b. Filament application | 9 lb/ton. |
| | c. Manual resin application | 7 lb/ton. |
| 2. Open molding—non-CR/HS | a. mechanical resin application | 13 lb/ton. |
| | b. Filament application | 10 lb/ton. |
| | c. Manual resin application | 5 lb/ton. |
| 3. Open molding—tooling | a. Mechanical resin application | 13 lb/ton. |
| | b. Manual resin application | 8 lb/ton. |
| 4. Open molding—low flame spread/low smoke products | a. Mechanical resin application | 25 lb/ton. |
| | b. Filament application | 14 lb/ton. |
| | c. Manual resin application | 12 lb/ton. |
| 5. Open molding—shrinkage | a. Mechanical resin application | 18 lb/ton. |

| | | |
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| controlled resins | | |
| | b. Filament application | 11 lb/ton. |
| | c. Manual resin application | 9 lb/ton. |
| 6. Open molding—gel coat[2] | a. Tooling gel coating | 22 lb/ton. |
| | b. White/off white pigmented gel coating | 22 lb/ton. |
| | c. All other pigmented gel coating | 19 lb/ton. |
| | d. CR/HS or high performance gel coat | 31 lb/ton. |
| | e. Fire retardant gel coat | 43 lb/ton. |
| | f. Clear production gel coat | 27 lb/ton. |
| 7. Centrifugal casting—CR/HS[3,4] | A vent system that moves heated air through the mold | 27 lb/ton. |
| 8. Centrifugal casting—non-CR/HS[3,4] | A vent system that moves heated air through the mold | 21 lb/ton. |
| 7. Centrifugal casting—CR/HS[3,4] | A vent system that moves ambient air through the mold | 2 lb/ton. |
| 8. Centrifugal casting—non-CR/HS[3,4] | A vent system that moves ambient air through the mold | 1 lb/ton. |
| 9. SMC Manufacturing | N/A | 2.4 lb/ton. |

[1]Organic HAP emissions limits for open molding and centrifugal casting expressed as lb/ton are calculated using the equations shown in Table 1 to this subpart. You must be at or below these values based on a 12-month rolling average.

[2]These limits are for spray application of gel coat. Manual gel coat application must be included as part of spray gel coat application for compliance purposes using the same organic HAP emissions factor equation and organic HAP emissions limit. If you only apply gel coat with manual application, treat the manually applied gel coat as if it were applied with atomized spray for compliance determinations.

[3]Centrifugal casting operations where the mold is not vented during spinning and cure are considered to be closed molding and are not subject to any emissions limit. Centrifugal casting operations where the mold is not vented during spinning and cure, and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques are considered to be open molding operations and the appropriate open molding emission limits apply.

[4]Centrifugal casting operations where the mold is vented during spinning and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques, use the appropriate centrifugal casting emission limit to determine compliance. Calculate your emission factor using the appropriate centrifugal casting emission factor in Table 1 to this subpart, or a site specific emission factor as discussed in §63.5796.

[68 FR 19402, Apr. 21, 2003, as amended at 70 FR 50133, Aug. 25, 2005]

**Table 6 to Subpart WWWW of Part 63—Basic Requirements for Performance Tests, Performance Evaluations, and Design Evaluations for New and Existing Sources Using Add-On Control Devices**

As required in §63.5850 you must conduct performance tests, performance evaluations, and design evaluation according to the requirements in the following table:

| For . . . | You must . . . | Using . . . | According to the following requirements . . . |
|---|---|---|---|
| 1. Each enclosure used to collect and route organic HAP emissions to an add-on control device that is a PTE | Meet the requirements for a PTE | EPA method 204 of appendix M of 40 CFR part 51 | Enclosures that meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51 for a PTE are assumed to have a capture efficiency of 100%. Note that the criteria that all access doors and windows that are not treated as natural draft openings shall be closed during routine operation of the process is not intended to require that these doors and windows be closed at all times. It means that doors and windows must be closed any time that you are not actually moving parts or equipment through them. Also, any styrene retained in hollow parts and liberated outside the PTE is not considered to be a violation of the EPA Method 204 criteria. |
| 2. Each enclosure used to collect and route organic HAP emissions to an add-on control device that is not a PTE | a. Determine the capture efficiency of each enclosure used to capture organic HAP emissions sent to an add-on control device | i. EPA methods 204B through E of appendix M of 40 CFR part 51, or | (1) Enclosures that do not meet the requirements for a PTE must determine the capture efficiency by constructing a temporary total enclosure according to the requirements of EPA Method 204 of appendix M of 40 CFR part 51 and measuring the mass flow rates of the organic HAP in the exhaust streams going to the atmosphere and to the control device. Test runs for EPA Methods 204B through E of appendix M of 40 CFR part 51 must be at least 3 hours. |
| | | ii. An alternative test method that meets the requirements in 40 CFR part 51, appendix M | (1) The alternative test method must the data quality objectives and lower confidence limit approaches for alternative capture efficiency protocols requirements contained in 40 CFR part 63 subpart KK, appendix A. |
| 3. Each control device used to | Determine the control efficiency of | The test methods specified in | Testing and evaluation requirements are contained in 40 CFR part 63, |

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| comply with a percent reduction requirement, or an organic HAP emissions limit | each control device used to control organic HAP emissions | §63.5850 to this subpart | subpart SS, and §63.5850 to this subpart. |
| 4. Determining organic HAP emission factors for any operation | Determine the mass organic HAP emissions rate | The test methods specified in §63.5850 to this subpart | Testing and evaluation requirements are contained in 40 CFR part 63, subpart SS, and §63.5850 to this subpart. |

**Table 7 to Subpart WWWW of Part 63—Options Allowing Use of the Same Resin Across Different Operations That Use the Same Resin Type**

As specified in §63.5810(d), when electing to use the same resin(s) for multiple resin application methods, you may use any resin(s) with an organic HAP content less than or equal to the values shown in the following table, or any combination of resins whose weighted average organic HAP content based on a 12-month rolling average is less than or equal to the values shown the following table:

| If your facility has the following resin type and application method . . . | The highest resin weight is* * * percent organic HAP content, or weighted average weight percent organic HAP content, you can use for . . . | is . . . |
|---|---|---|
| 1. CR/HS resins, centrifugal casting[1,2] | a. CR/HS mechanical | [3]48.0 |
| | b. CR/HS filament application | 48.0 |
| | c. CR/HS manual | 48.0 |
| 2. CR/HS resins, nonatomized mechanical | a. CR/HS filament application | 46.4 |
| | b. CR/HS manual | 46.4 |
| 3. CR/HS resins, filament application | CR/HS manual | 42.0 |
| 4. non-CR/HS resins, filament application | a. non-CR/HS mechanical | [3]45.0 |
| | b. non-CR/HS manual | 45.0 |
| | c. non-CR/HS centrifugal casting[1,2] | 45.0 |
| 5. non-CR/HS resins, nonatomized mechanical | a. non-CR/HS manual | 38.5 |
| | b. non-CR/HS centrifugal casting[1,2] | 38.5 |
| 6. non-CR/HS resins, centrifugal casting[1,2] | non-CR/HS manual | 37.5 |
| 7. tooling resins, nonatomized mechanical | tooling manual | 91.4 |
| 8. tooling resins, manual | tooling atomized mechanical | 45.9 |

[1]If the centrifugal casting operation blows heated air through the molds, then 95 percent capture and control must be used if the facility wishes to use this compliance option.

[2]If the centrifugal casting molds are not vented, the facility may treat the centrifugal casting operations as if they were vented if they wish to use this compliance option.

[3]Nonatomized mechanical application must be used.

[70 FR 50133, Aug. 25, 2005]

**Table 8 to Subpart WWWW of Part 63—Initial Compliance With Organic HAP Emissions Limits**

As specified in §63.5860(a), you must demonstrate initial compliance with organic HAP emissions limits as specified in the following table:

| For . . . | That must meet the following organic HAP emissions limit . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 1. open molding and centrifugal casting operations | a. an organic HAP emissions limit shown in Tables 3 or 5 to this subpart, or an organic HAP content limit shown in Table 7 to this subpart | i. you have met the appropriate organic HAP emissions limits for these operations as calculated using the procedures in §63.5810 on a 12-month rolling average 1 year after the appropriate compliance date, and/or<br>ii. you demonstrate that any individual resins or gel coats not included in (i) above, as applied, meet their applicable emission limits, or<br>iii. you demonstrate using the appropriate values in Table 7 to this subpart that the weighted average of all resins and gel coats for each resin type and application method meet the appropriate organic HAP contents. |
| 2. open molding centrifugal casting, continuous lamination/casting, SMC and BMC manufacturing, and mixing operations | a. reduce total organic HAP emissions by at least 95 percent by weight | total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent by weight. |
| 3. continuous lamination/casting operations | a. reduce total organic HAP emissions, by at least 58.5 weight percent, or | total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency in Table 6 to this subpart and the calculation procedures specified in §§63.5865 through 63.5890, are reduced by at least 58.5 percent by weight. |
| | b. not exceed an organic HAP emissions limit of 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus | total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart and the calculation procedures specified in §§63.5865 through 63.5890, do not exceed 15.7 lbs of organic HAP per ton of neat resin plus and neat gel |

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| | | coat plus. |
| 4. continuous lamination/casting operations | a. reduce total organic HAP emissions by at least 95 weight percent or | total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart and the calculation procedures specified in §§63.5865 through 63.5890, are reduced by at least 95 percent by weight |
| | b. not exceed an organic HAP emissions limit of 1.47 lbs of organic HAP per ton of neat resin plus and neat gel coat plus | total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 and the calculation procedures specified in §§63.5865 through 63.5890, do not exceed 1.47 lbs of organic HAP of per ton of neat resin plus and neat gel coat plus. |
| 5. pultrusion operations | a. reduce total organic HAP emissions by at least 60 percent by weight | i. total organic HAP emissions, based on the results of the capture efficiency and add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 60 percent by weight, and/or<br>ii. as part of the notification of initial compliance status, the owner/operator submits a certified statement that all pultrusion lines not controlled with an add-on control device, but for which an emission reduction is being claimed, are using direct die injection, and/or wet-area enclosures that meet the criteria of §63.5830. |
| 6. pultrusion operations | a. reduce total organic HAP emissions by at least 95 percent by weight | i. total organic HAP emissions, based on the results of the capture efficiency and add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent by weight. |

[70 FR 50134, Aug. 25, 2005]

**Table 9 to Subpart WWWW of Part 63—Initial Compliance With Work Practice Standards**

As specified in §63.5860(a), you must demonstrate initial compliance with work practice standards as specified in the following table:

| For . . . | That must meet the following standards . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 1. a new or existing closed molding operation using compression/injection molding | uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill | the owner or operator submits a certified statement in the notice of compliance status that only one charge is uncovered, unwrapped, or exposed per mold cycle per |

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| | all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting | compression/injection molding machine, or prior to the loader, hoppers are closed except when adding materials, and materials are recovered after slitting. |
| 2. a new or existing cleaning operation | not use cleaning solvents that contain HAP, except that styrene may be used in closed systems, and organic HAP containing materials may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin between storage and applying resin to the mold or reinforcement | the owner or operator submits a certified statement in the notice of compliance status that all cleaning materials, except styrene contained in closed systems, or materials used to clean cured resin from application equipment, contain no HAP. |
| 3. a new or existing materials HAP-containing materials storage operation | keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety | the owner or operator submits a certified statement in the notice of compliance status that all HAP-containing storage containers are kept closed or covered except when adding or removing materials, and that any bulk storage tanks are vented only as necessary for safety. |
| 4. an existing or new SMC manufacturing operation | close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open | the owner or operator submits a certified statement in the notice of compliance status that the resin delivery system is closed or covered. |
| 5. an existing or new SMC manufacturing operation | use a nylon containing film to enclose SMC | the owner or operator submits a certified statement in the notice of compliance status that a nylon-containing film is used to enclose SMC. |
| 6. an existing or new mixing or BMC manufacturing operation | use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation | the owner or operator submits a certified statement in the notice of compliance status that mixer covers are closed during mixing except when adding materials to the mixers, and that gaps around mixer |

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| | | shafts and required instrumentation are less than 1 inch. |
| 7. an existing mixing or BMC manufacturing operation | not actively vent mixers to the atmosphere while the mixing agitator is turning, except that venting is allowed during addition of materials, or as necessary prior to adding materials for safety | the owner or operator submits a certified statement in the notice of compliance status that mixers are not actively vented to the atmosphere when the agitator is turning except when adding materials or as necessary for safety. |
| 8. a new or existing mixing or BMC manufacturing operation | keep the mixer covers closed during mixing except when adding materials to the mixing vessels | the owner or operator submits a certified statement in the notice of compliance status that mixers closed except when adding materials to the mixing vessels. |
| 9. a new or existing pultrusion operation manufacturing parts that meet the following criteria: 1,000 or more reinforcements or the glass equivalent of 1,000 ends of 113 yield roving or more; and have a cross sectional area of 60 square inches or more that is not subject to the 95 percent organic HAP emission reduction requirement | i. Not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s),<br>ii. not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device,<br>iii. use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across the wet-out area(s),<br>iv. direct any compressed air exhausts away from resin and wet-out area(s),<br>v. convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air,<br>vi. clover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled, and<br>vii. cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical. | the owner or operator submits a certified statement in the notice of compliance status that they have complied with all the requirements listed in 9.i through 9.vii. |

[70 FR 50135, Aug. 25, 2005]

**Table 10 to Subpart WWWW of Part 63—Data Requirements for New and Existing Continuous Lamination Lines and Continuous Casting Lines Complying With a Percent Reduction Limit on a Per Line Basis**

As required in §63.5865(a), in order to comply with a percent reduction limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:

| For each line where the wet-out area . . . | And the oven . . . | You must determine . . . |
|---|---|---|
| 1. Has an enclosure that is not a permanent total enclosure (PTE) and the captured organic HAP emissions are controlled by an add-on control device | a. Is uncontrolled | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual controlled wet-out area organic HAP emissions,<br>iii. Annual uncontrolled oven organic HAP emissions,<br>iv. The capture efficiency of the wet-out area enclosure, |
| | | v. The destruction efficiency of the add-on control device, and<br>vi. The amount of neat resin plus and neat gel coat plus applied. |
| 2. Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device | a. Is uncontrolled | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual controlled wet-out area organic HAP emissions,<br>iii. Annual uncontrolled oven organic HAP emissions,<br>iv. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE,<br>v. The destruction efficiency of the add-on control device, and<br>vi. The amount of neat resin plus and neat gel coat plus applied. |
| 3. Is uncontrolled | a. Is controlled by an add-on control device | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual uncontrolled oven organic HAP emissions,<br>iii. Annual controlled oven organic HAP emissions,<br>iv. The capture efficiency of the oven,<br>v. the destruction efficiency of the add-on control device, and<br>vi. the amount of neat resin plus and neat gel coat plus applied. |
| 4. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device | a. Is controlled by an add-on control device | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual controlled wet-out area organic HAP emissions, |

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| | | iii. Annual uncontrolled oven organic HAP emissions,<br>iv. Annual controlled oven organic HAP emissions;<br>v. The capture efficiency of the wet-out area enclosure,<br>vi. Inlet organic HAP emissions to the add-on control device,<br>vii. Outlet organic HAP emissions from the add-on control device, and<br>viii. The amount of neat resin plus and neat gel coat plus applied. |
| 5. Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device | a. Is controlled by an add-on control device | i. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE,<br>ii. The capture efficiency of the oven, and |
| | | iii. The destruction efficiency of the add-on control device. |

**Table 11 to Subpart WWWW of Part 63—Data Requirements for New and Existing Continuous Lamination and Continuous Casting Lines Complying With a Percent Reduction Limit or a Lbs/Ton Limit on an Averaging Basis**

As required in §63.5865, in order to comply with a percent reduction limit or a lbs/ton limit on an averaging basis for continuous lamination lines and continuous casting lines you must determine the data in the following table:

| For each . . . | That . . . | You must determine . . . |
|---|---|---|
| 1. Wet-out area | Is uncontrolled | Annual uncontrolled wet-out area organic HAP emissions. |
| 2. Wet-out area | a. Has an enclosure that is not a PTE | i. The capture efficiency of the enclosure, and<br>ii. Annual organic HAP emissions that escape the enclosure. |
| 3. Wet-out area | Has an enclosure that is a PTE | That the enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE. |
| 4. Oven | Is uncontrolled | Annual uncontrolled oven organic HAP emissions. |
| 5. Line | a. Is controlled or uncontrolled | i. The amount of neat resin plus applied, and<br>ii. The amount of neat gel coat plus applied. |
| 6. Add-on control device | | i. Total annual inlet organic HAP emissions, and total annual outlet organic HAP emissions. |

**Table 12 to Subpart WWWW of Part 63—Data Requirements for New and Existing Continuous Lamination Lines and Continuous Casting Lines Complying With a Lbs/Ton Organic HAP Emissions Limit on a Per Line Basis**

As required in §63.5865(b), in order to comply with a lbs/ton organic HAP emissions limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:

| For each line where the wet- out area . . . | And the oven . . . | You must determine . . . |
|---|---|---|
| 1. Is uncontrolled | a. Is uncontrolled | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual uncontrolled oven organic HAP emissions, and<br>iii. Annual neat resin plus and neat gel coat plus applied. |
| 2. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device | a. Is uncontrolled | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual controlled wet-out area organic HAP emissions,<br>iii. Annual uncontrolled oven organic HAP emissions, |
| | | iv. The capture efficiency of the wet-out area enclosure,<br>v. The destruction efficiency of the add-on control device, and<br>vi. The amount of neat resin plus and neat gel coat plus applied. |
| 3. Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by an add-on control device | a. Is uncontrolled | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual controlled wet-out area organic HAP emissions,<br>iii. Annual uncontrolled oven organic HAP emissions, |
| | | iv. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE,<br>v. The destruction efficiency of the add-on control device, and<br>vi. The amount of neat resin plus and neat gel coat plus applied. |
| 4. Is uncontrolled | a. Is controlled by an add-on control device | i. Annual uncontrolled wet-out area organic HAP emissions,<br>ii. Annual uncontrolled oven organic HAP emissions,<br>iii. Annual controlled oven organic HAP emissions, |
| | | iv. The capture efficiency of the oven,<br>v. The destruction efficiency of the add-on control device, and<br>vi. The amount of neat resin plus and neat gel coat plus applied. |
| 5. Has an enclosure that is not a PTE and the captured organic HAP | a. Is controlled by an add-on control | i. Annual uncontrolled wet-out area organic HAP emissions, |

| | | |
|---|---|---|
| emissions are controlled by an add-on control device | device | ii. Annual controlled wet-out area organic HAP emissions,<br>iii. Annual uncontrolled oven organic HAP emissions, |
| | | iv. Annual controlled oven organic HAP emissions,<br>v. The capture efficiency of the wet-out area enclosure,<br>vi. The capture efficiency of the oven, |
| | | vii. The destruction efficiency of the add-on control device, and<br>viii. The amount of neat resin plus and neat gel coat plus applied. |
| 6. Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by add-on control device | a. Is controlled by an add-on control device | i. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE,<br>ii. The capture efficiency of the oven,<br>iii. Inlet organic HAP emissions to the an add-on control device, and |
| | | iv. Outlet organic HAP emissions from the add-on control device. |

**Table 13 to Subpart WWWW of Part 63—Applicability and Timing of Notifications**

As required in §63.5905(a), you must determine the applicable notifications and submit them by the dates shown in the following table:

| If your facility . . . | You must submit . . . | By this date . . . |
|---|---|---|
| 1. Is an existing source subject to this subpart | An Initial Notification containing the information specified in §63.9(b)(2) | No later than the dates specified in §63.9(b)(2). |
| 2. Is a new source subject to this subpart | The notifications specified in §63.9(b)(4) and (5) | No later than the dates specified §63.9(b)(4) and (5). |
| 3. Qualifies for a compliance extension as specified in §63.9(c) | A request for a compliance extension as specified in §63.9(c) | No later than the dates specified in §63.6(i). |
| 4. Is complying with organic HAP emissions limit averaging provisions | A Notification of Compliance Status as specified in §63.9(h) | No later than 1 year plus 30 days after your facility's compliance date. |
| 5. Is complying with organic HAP content limits, application equipment requirements, or organic HAP emissions limit other than organic HAP emissions limit averaging | A Notification of Compliance Status as specified in §63.9(h) | No later than 30 calendar days after your facility's compliance date. |

| | | |
|---|---|---|
| 6. Is complying by using an add-on control device | a. A notification of intent to conduct a performance test as specified in §63.9(e) | No later than the date specified in §63.9(e). |
| | b. A notification of the date for the CMS performance evaluation as specified in §63.9(g) | The date of submission of notification of intent to conduct a performance test. |
| | c. A Notification of Compliance Status as specified in §63.9(h) | No later than 60 calendar days after the completion of the add-on control device performance test and CMS performance evaluation. |

**Table 14 to Subpart WWWW of Part 63—Requirements for Reports**

As required in §63.5910(a), (b), (g), and (h), you must submit reports on the schedule shown in the following table:

| You must submit a(n) | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| 1. Compliance report | a. A statement that there were no deviations during that reporting period if there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and visible emission limit) that apply to you and there were no deviations from the requirements for work practice standards in Table 4 to this subpart that apply to you. If there were no periods during which the CMS, including CEMS, and operating parameter monitoring systems, was out of control as specified in §63.8(c)(7), the report must also contain a statement that there were no periods during which the CMS was out of control during the reporting period | Semiannually according to the requirements in §63.5910(b). |
| | b. The information in §63.5910(d) if you have a deviation from any emission limitation (emission limit, operating limit, or work practice standard) during the reporting period. If there were periods during which the CMS, including CEMS, and operating parameter monitoring systems, was out of control, as specified in §63.8(c)(7), the report must contain the information in §63.5910(e) | Semiannually according to the requirements in §63.5910(b). |
| | c. The information in §63.10(d)(5)(i) if you had a startup, shutdown or malfunction during the reporting period, and you took | Semiannually according to the requirements in §63.5910(b). |

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| | actions consistent with your startup, shutdown, and malfunction plan | |
| 2. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your startup, shutdown, and malfunction plan | a. Actions taken for the event | By fax or telephone within 2 working days after starting actions inconsistent with the plan. |
| | b. The information in §63.10(d)(5)(ii) | By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. (§63.10(d)(5)(ii)). |

**Table 15 to Subpart WWWW of Part 63—Applicability of General Provisions (Subpart A) to Subpart WWWW of Part 63**

As specified in §63.5925, the parts of the General Provisions which apply to you are shown in the following table:

| The general provisions reference . . . | That addresses . . . | And applies to subpart WWWW of part 63 . . . | Subject to the following additional information . . . |
|---|---|---|---|
| §63.1(a)(1) | General applicability of the general provisions | Yes | Additional terms defined in subpart WWWW of Part 63, when overlap between subparts A and WWWW of Part 63 of this part, subpart WWWW of Part 63 takes precedence. |
| §63.1(a)(2) through (4) | General applicability of the general provisions | Yes | |
| §63.1(a)(5) | Reserved | No | |
| §63.1(a)(6) | General applicability of the general provisions | Yes | |
| §63.1(a)(7) through (9) | Reserved | No | |
| §63.1(a)(10) through (14) | General applicability of the general provisions | Yes | |
| §63.1(b)(1) | Initial applicability determination | Yes | Subpart WWWW of Part 63 |

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| | | | clarifies the applicability in §§63.5780 and 63.5785. |
| §63.1(b)(2) | Reserved | No. | |
| §63.1(b)(3) | Record of the applicability determination | Yes | |
| §63.1(c)(1) | Applicability of this part after a relevant standard has been set under this part | Yes | Subpart WWWW of Part 63 clarifies the applicability of each paragraph of subpart A to sources subject to subpart WWWW of Part 63. |
| §63.1(c)(2) | Title V operating permit requirement | Yes | All major affected sources are required to obtain a title V operating permit. Area sources are not subject to subpart WWWW of Part 63. |
| §63.1(c)(3) and (4) | Reserved | No | |
| §63.1(c)(5) | Notification requirements for an area source that increases HAP emissions to major source levels | Yes | |
| §63.1(d) | Reserved | No | |
| §63.1(e) | Applicability of permit program before a relevant standard has been set under this part | Yes | |
| §63.2 | Definitions | Yes | Subpart WWWW of Part 63 defines terms in §63.5935. When overlap between subparts A and WWWW of Part 63 occurs, you must comply with the subpart WWWW of Part 63 definitions, which take precedence over the subpart A definitions. |
| §63.3 | Units and abbreviations | Yes | Other units and abbreviations used in subpart WWWW of Part 63 are defined in subpart WWWW of Part 63. |
| §63.4 | Prohibited activities and circumvention | Yes | §63.4(a)(3) through (5) is reserved and does not apply. |
| §63.5(a)(1) and (2) | Applicability of construction and reconstruction | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.5(b)(1) | Relevant standards for new sources upon construction | Yes | Existing facilities do not become reconstructed under |

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| | | | subpart WWWW of Part 63. |
| §63.5(b)(2) | Reserved | No | |
| §63.5(b)(3) | New construction/reconstruction | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.5(b)(4) | Construction/reconstruction notification | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.5(b)(5) | Reserved | No | |
| §63.5(b)(6) | Equipment addition or process change | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.5(c) | Reserved | No | |
| §63.5(d)(1) | General application for approval of construction or reconstruction | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.5(d)(2) | Application for approval of construction | Yes | |
| §63.5(d)(3) | Application for approval of reconstruction | No | |
| §63.5(d)(4) | Additional information | Yes | |
| §63.5(e)(1) through (5) | Approval of construction or reconstruction | Yes | |
| §63.5(f)(1) and (2) | Approval of construction or reconstruction based on prior State preconstruction review | Yes | |
| §63.6(a)(1) | Applicability of compliance with standards and maintenance requirements | Yes | |
| §63.6(a)(2) | Applicability of area sources that increase HAP emissions to become major sources | Yes | |
| §63.6(b)(1) through (5) | Compliance dates for new and reconstructed sources | Yes | Subpart WWWW of Part 63 clarifies compliance dates in §63.5800. |
| §63.6(b)(6) | Reserved | No | |
| §63.6(b)(7) | Compliance dates for new operations or equipment that cause an area source to become a major source | Yes | New operations at an existing facility are not subject to new source standards. |
| §63.6(c)(1) and | Compliance dates for existing | Yes | Subpart WWWW of Part 63 |

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| (2) | sources | | clarifies compliance dates in §63.5800. |
| §63.6(c)(3) and (4) | Reserved | No | |
| §63.6(c)(5) | Compliance dates for existing area sources that become major | Yes | Subpart WWWW of Part 63 clarifies compliance dates in §63.5800. |
| §63.6(d) | Reserved | No | |
| §63.6(e)(1) and (2) | Operation & maintenance requirements | Yes | |
| §63.6(e)(3) | Startup, shutdown, and malfunction plan and recordkeeping | Yes | Subpart WWWW of Part 63 requires a startup, shutdown, and malfunction plan only for sources using add-on controls. |
| §63.6(f)(1) | Compliance except during periods of startup, shutdown, and malfunction | No | Subpart WWWW of Part 63 requires compliance during periods of startup, shutdown, and malfunction, except startup, shutdown, and malfunctions for sources using add-on controls. |
| §63.6(f)(2) and (3) | Methods for determining compliance | Yes | |
| §63.6(g)(1) through (3) | Alternative standard | Yes | |
| §63.6(h) | Opacity and visible emission Standards | No | Subpart WWWW of Part 63 does not contain opacity or visible emission standards. |
| §63.6(i)(1) through (14) | Compliance extensions | Yes | |
| §63.6(i)(15) | Reserved | No | |
| §63.6(i)(16) | Compliance extensions | Yes | |
| §63.6(j) | Presidential compliance exemption | Yes | |
| §63.7(a)(1) | Applicability of performance testing requirements | Yes | |
| §63.7(a)(2) | Performance test dates | No | Subpart WWWW of Part 63 initial compliance requirements are in §63.5840. |
| §63.7(a)(3) | CAA Section 114 authority | Yes | |

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| §63.7(b)(1) | Notification of performance test | Yes | |
| §63.7(b)(2) | Notification rescheduled performance test | Yes | |
| §63.7(c) | Quality assurance program, including test plan | Yes | Except that the test plan must be submitted with the notification of the performance test. |
| §63.7(d) | Performance testing facilities | Yes | |
| §63.7(e) | Conditions for conducting performance tests | Yes | Performance test requirements are contained in §63.5850. Additional requirements for conducting performance tests for continuous lamination/casting are included in §63.5870. |
| §63.7(f) | Use of alternative test method | Yes | |
| §63.7(g) | Performance test data analysis, recordkeeping, and reporting | Yes | |
| §63.7(h) | Waiver of performance tests | Yes | |
| §63.8(a)(1) and (2) | Applicability of monitoring requirements | Yes | |
| §63.8(a)(3) | Reserved | No | |
| §63.8(a)(4) | Monitoring requirements when using flares | Yes | |
| §63.8(b)(1) | Conduct of monitoring exceptions | Yes | |
| §63.8(b)(2) and (3) | Multiple effluents and multiple monitoring systems | Yes | |
| §63.8(c)(1) | Compliance with CMS operation and maintenance requirements | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(c)(2) and (3) | Monitoring system installation | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(c)(4) | CMS requirements | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |

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| §63.8(c)(5) | Continuous Opacity Monitoring System (COMS) minimum procedures | No | Subpart WWWW of Part 63 does not contain opacity standards. |
| §63.8(c)(6) through (8) | CMS calibration and periods CMS is out of control | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(d) | CMS quality control program, including test plan and all previous versions | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(e)(1) | Performance evaluation of CMS | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(e)(2) | Notification of performance evaluation | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(e)(3) and (4) | CMS requirements/alternatives | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(e)(5)(i) | Reporting performance evaluation results | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.8(e)(5)(ii) | Results of COMS performance evaluation | No | Subpart WWWW of Part 63 does not contain opacity standards. |
| §63.8(f)(1) through (3) | Use of an alternative monitoring method | Yes | |
| §63.8(f)(4) | Request to use an alternative monitoring method | Yes | |
| §63.8(f)(5) | Approval of request to use an alternative monitoring method | Yes | |
| §63.8(f)(6) | Request for alternative to relative accuracy test and associated records | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission |

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| | | | limit. |
| §63.8(g)(1) through (5) | Data reduction | Yes | |
| §63.9(a)(1) through (4) | Notification requirements and general information | Yes | |
| §63.9(b)(1) | Initial notification applicability | Yes | |
| §63.9(b)(2) | Notification for affected source with initial startup before effective date of standard | Yes | |
| §63.9(b)(3) | Reserved | No | |
| §63.9(b)(4)(i) | Notification for a new or reconstructed major affected source with initial startup after effective date for which an application for approval of construction or reconstruction is required | Yes | |
| §63.9(b)(4)(ii) through (iv) | Reserved | No | |
| §63.9(b)(4)(v) | Notification for a new or reconstructed major affected source with initial startup after effective date for which an application for approval of construction or reconstruction is required | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.9(b)(5) | Notification that you are subject to this subpart for new or reconstructed affected source with initial startup after effective date and for which an application for approval of construction or reconstruction is not required | Yes | Existing facilities do not become reconstructed under subpart WWWW of Part 63. |
| §63.9(c) | Request for compliance extension | Yes | |
| §63.9(d) | Notification of special compliance requirements for new source | Yes | |
| §63.9(e) | Notification of performance test | Yes | |
| §63.9(f) | Notification of opacity and visible emissions observations | No | Subpart WWWW of Part 63 does not contain opacity or visible emission standards. |
| §63.9(g)(1) | Additional notification requirements for sources using CMS | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |

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| §63.9(g)(2) | Notification of compliance with opacity emission standard | No | Subpart WWWW of Part 63 does not contain opacity emission standards. |
| §63.9(g)(3) | Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.9(h)(1) through (3) | Notification of compliance status | Yes | |
| §63.9(h)(4) | Reserved | No | |
| §63.9(h)(5) and (6) | Notification of compliance status | Yes | |
| §63.9(i) | Adjustment of submittal deadlines | Yes | |
| §63.9(j) | Change in information provided | Yes | |
| §63.10(a) | Applicability of recordkeeping and reporting | Yes | |
| §63.10(b)(1) | Records retention | Yes | |
| §63.10(b)(2)(i) through (v) | Records related to startup, shutdown, and malfunction | Yes | Only applies to facilities that use an add-on control device. |
| §63.10(b)(2)(vi) through (xi) | CMS records, data on performance tests, CMS performance evaluations, measurements necessary to determine conditions of performance tests, and performance evaluations | Yes | |
| §63.10(b)(2)(xii) | Record of waiver of recordkeeping and reporting | Yes | |
| §63.10(b)(2)(xiii) | Record for alternative to the relative accuracy test | Yes | |
| §63.10(b)(2)(xiv) | Records supporting initial notification and notification of compliance status | Yes | |
| §63.10(b)(3) | Records for applicability determinations | Yes | |
| §63.10(c)(1) | CMS records | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.10(c)(2) through (4) | Reserved | No | |

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| §63.10(c)(5) through (8) | CMS records | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.10(c)(9) | Reserved | No | |
| §63.10(c)(10) through (15) | CMS records | Yes | This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. |
| §63.10(d)(1) | General reporting requirements | Yes | |
| §63.10(d)(2) | Report of performance test results | Yes | |
| §63.10(d)(3) | Reporting results of opacity or visible emission observations | No | Subpart WWWW of Part 63 does not contain opacity or visible emission standards. |
| §63.10(d)(4) | Progress reports as part of extension of compliance | Yes | |
| §63.10(d)(5) | Startup, shutdown, and malfunction reports | Yes | Only applies if you use an add-on control device. |
| §63.10(e)(1) through (3) | Additional reporting requirements for CMS | Yes | This section applies if you have an add-on control device and elect to use a CEM to demonstrate continuous compliance with an emission limit. |
| §63.10(e)(4) | Reporting COMS data | No | Subpart WWWW of Part 63 does not contain opacity standards. |
| §63.10(f) | Waiver for recordkeeping or reporting | Yes | |
| §63.11 | Control device requirements | Yes | Only applies if you elect to use a flare as a control device. |
| §63.12 | State authority and delegations | Yes | |
| §63.13 | Addresses of State air pollution control agencies and EPA Regional Offices | Yes | |
| §63.14 | Incorporations by reference | Yes | |
| §63.15 | Availability of information and confidentiality | Yes | |

## Appendix A to Subpart WWWW of Part 63—Test Method for Determining Vapor Suppressant Effectiveness

*1. Scope and Application*

1.1 *Applicability.* If a facility is using vapor suppressants to reduce hazardous air pollutant (HAP) emissions, the organic HAP emission factor equations in Table 1 to this subpart require that the vapor suppressant effectiveness factor be determined. The vapor suppressant effectiveness factor is then used as one of the inputs into the appropriate organic HAP emission factor equation. The vapor suppressant effectiveness factor test is not intended to quantify overall volatile emissions from a resin, nor to be used as a stand-alone test for emissions determination. This test is designed to evaluate the performance of film forming vapor suppressant resin additives. The results of this test are used only in combination with the organic HAP emissions factor equations in Table 1 to this subpart to generate emission factors.

1.1.1 The open molding process consists of application of resin and reinforcements to the mold surface, followed by a manual rollout process to consolidate the laminate, and the curing stage where the laminate surface is not disturbed. Emission studies have shown that approximately 50 percent to 55 percent of the emissions occur while the resin is being applied to the mold. Vapor suppressants have little effect during this portion of the lamination process, but can have a significant effect during the curing stage. Therefore, if a suppressant is 100 percent effective, the overall emissions from the process would be reduced by 45 percent to 50 percent, representing the emissions generated during the curing stage. In actual practice, vapor suppressant effectiveness will be less than 100 percent and the test results determine the specific effectiveness in terms of the vapor suppressant effectiveness factor. This factor represents the effectiveness of a specific combination of suppressant additive and resin formulation.

1.1.2 A resin manufacturer may supply a molder with a vapor-suppressed resin, and employ this test to provide the molder with the vapor suppressant effectiveness factor for that combination of resin and vapor suppressant. The factor qualifies the effectiveness of the vapor suppressant when the resin is tested in the specific formulation supplied to the molder. The addition of fillers or other diluents by the molder may impact the effectiveness of the vapor suppressant. The formulation, including resin/glass ratio and filler content, used in the test should be similar to the formulation to be used in production. The premise of this method is to compare laminate samples made with vapor suppressant additive and made without the additive. The difference in emissions between the two yields the vapor suppressant effectiveness factor.

1.1.3 The method uses a mass balance determination to establish the relative loss of the volatile component from unsaturated polyester or vinyl ester resins, with and without vapor suppressant additives. The effectiveness of a specific vapor suppressant and resin mixture is determined by comparing the relative volatile weight losses from vapor suppressed and non-suppressed resins. The volatile species are not separately analyzed. While the species contained in the volatile component are not determined, an extended listing of potential monomer that may be contained in unsaturated polyester or vinyl ester resins is provided in Table 1.1. However, most polyester and vinyl ester resin formulations presently used by the composites industry only contain styrene monomer.

**Table 1.1—List of Monomers Potentially Present in Unsaturated Polyester/Vinyl Ester Resins**

| Monomer | CAS No. |
|---|---|
| Styrene | 100–42–5. |
| Vinyl toluene | 25013–15–4. |
| Methyl methacrylate | 80–62–6. |
| Alpha methyl styrene | 98–83–9. |
| Para methyl styrene | Vinyl toluene isomer. |
| Chlorostyrene | 1331–28–8. |

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| Diallyl phthalate | 131–17–9. |
| Other volatile monomers | Various. |

*2. Summary of Method*

2.1 Differences in specific resin and suppressant additive chemistry affect the performance of a vapor suppressant. The purpose of this method is to quantify the effectiveness of a specific combination of vapor suppressant and unsaturated polyester or vinyl ester resin as they are to be used in production. This comparative test quantifies the loss of volatiles from a fiberglass reinforced laminate during the roll-out and curing emission phases, for resins formulated with and without a suppressant additive. A criterion for this method is the testing of a non-vapor suppressed resin system and testing the same resin with a vapor suppressant. The two resins are as identical as possible with the exception of the addition of the suppressant to one. The exact formulation used for the test will be determined by the in-use production requirements. Each formulation of resin, glass, fillers, and additives is developed to meet particular customer and or performance specifications.

2.2 The result of this test is used as an input factor in the organic HAP emissions factor equations in Table 1 to this subpart, which allows these equations to predict emissions from a specific combination of resin and suppressant. This test does not provide an emission rate for the entire lamination process.

*3. Definitions and Acronyms*

3.1 Definitions

3.1.1 *Vapor suppressant.* An additive that inhibits the evaporation of volatile components in unsaturated polyester or vinyl ester resins.

3.1.2 *Unsaturated polyester resin.* A thermosetting resin commonly used in composites molding.

3.1.3 *Unsaturated vinyl ester resin.* A thermosetting resin used in composites molding for corrosion resistant and high performance applications.

3.1.4 *Laminate.* A combination of fiber reinforcement and a thermoset resin.

3.1.5 *Chopped strand mat.* Glass fiber reinforcement with random fiber orientation.

3.1.6 *Initiator.* A curing agent added to an unsaturated polyester or vinyl ester resin.

3.1.7 *Resin application roller.* A tool used to saturate and compact a wet laminate.

3.1.8 *Gel time.* The time from the addition of initiator to a resin to the state of resin gelation.

3.1.9 *Filled resin system.* A resin, which includes the addition of inert organic or inorganic materials to modify the resin properties, extend the volume and to lower the cost. Fillers include, but are not limited to; mineral particulates; microspheres; or organic particulates. This test is not intended to be used to determine the vapor suppressant effectiveness of a filler.

3.1.10 *Material safety data sheet.* Data supplied by the manufacturer of a chemical product, listing hazardous chemical components, safety precautions, and required personal protection equipment for a specific product.

3.1.11 *Tare(ed).* Reset a balance to zero after a container or object is placed on the balance; that is to subtract the weight of a container or object from the balance reading so as to weigh only the material placed in the container or on the object.

3.1.12 *Percent glass.* The specified glass fiber weight content in a laminate. It is usually determined by engineering requirements for the laminate.

3.2 Acronyms:

3.2.1 *VS* —vapor suppressed or vapor suppressant.

3.2.2 *NVS* —non-vapor suppressed.

3.2.3 *VSE* —vapor suppressant effectiveness.

3.2.4 *VSE Factor* —vapor suppressant effectiveness, factor used in the equations in Table 1 to this subpart.

3.2.5 *CSM* —chopped strand mat.

3.2.6 *MSDS* —material safety data sheet.

*4. Interferences*

There are no identified interferences which affect the results of this test.

*5. Safety*

Standard laboratory safety procedures should be used when conducting this test. Refer to specific MSDS for handling precautions.

*6. Equipment and Supplies*

Note: Mention of trade names or specific products or suppliers does not constitute an endorsement by the Environmental Protection Agency.

6.1 Required Equipment.

6.1.1 Balance enclosure.[1]

6.1.2 Two (2) laboratory balances—accurate to ±0.01g.[2]

6.1.3 Stop watch or balance data recording output to data logger with accuracy ±1 second.[3]

6.1.4 Thermometer—accurate to ±2.0 °F(±1.0 °C).[4]

6.1.5 A lipped pan large enough to hold the cut glass without coming into contact with the vertical sides, *e.g.* a pizza pan.[5]

6.1.6 Mylar film sufficient to cover the bottom of the pan.[6]

6.1.7 Tape to keep the Mylar from shifting in the bottom of the pan.[7]

6.1.8 Plastic tri-corner beakers of equivalent—250 ml to 400 ml capacity.[8]

6.1.9 Eye dropper or pipette.[9]

6.1.10 Disposable resin application roller,3/16&inch;–3/4&inch; diameter × 3&inch;–6&inch; roller length.[10]

6.1.11 Hygrometer or psychrometer[11] accurate to ±5 percent

6.1.12 Insulating board, (Teflon, cardboard, foam board etc.) to prevent the balance from becoming a heat sink.[12]

6.2 Optional Equipment.

6.2.1 Laboratory balance—accurate to ±.01g with digital output, such as an RS–232 bi-directional interface[13] for use with automatic data recording devices.

6.2.2 Computer with recording software configured to link to balance digital output. Must be programmed to record data at the minimum intervals required for manual data acquisition.

6.3 Supplies.

6.3.1 Chopped strand mat—1.5 oz/ft.$^2$ [14]

*7. Reagents and Standards*

7.1 *Initiator.* The initiator type, brand, and concentration will be specified by resin manufacturer, or as required by production operation.

7.2 Polyester or vinyl ester resin.

7.3 Vapor suppressant additive.

*8. Sample Collection, Preservation, and Storage*

This test method involves the immediate recording of data during the roll out and curing phases of the lamination process during each test run. Samples are neither collected, preserved, nor stored.

*9. Quality Control*

Careful attention to the prescribed test procedure, routing equipment calibration, and replicate testing are the quality control activities for this test method. Refer to the procedures in section 11. A minimum of six test runs of a resin system without a suppressant and six test runs of the same resin with a suppressant shall be performed for each resin and suppressant test combination.

*10. Calibration and Standardization*

10.1 The laboratory balances, stopwatch, hygrometer and thermometer shall be maintained in a state of calibration prior to testing and thereafter on a scheduled basis as determined by the testing laboratory. This shall be accomplished by using certified calibration standards.

10.2 Calibration records shall be maintained for a period of 3 years.

*11. Test Procedure*

11.1 Test Set-up.

11.1.1 The laboratory balance is located in an enclosure to prevent fluctuations in balance readings due to localized air movement. The front of enclosure is open to permit work activity, but positioned so that local

airflow will not effect balance readings. The ambient temperature is determined by suspending the thermometer at a point inside the enclosure.

11.1.2 The bottom of the aluminum pan is covered with the Mylar film. The film is held in position with tape or by friction between the pan and the film.

11.1.3 The resin and pan are brought to room temperature. This test temperature must be between 70 °F and 80 °F. The testing temperature cannot vary more than ±2 °F during the measurement of test runs. Temperature shall be recorded at the same time weight is recorded on suppressed and non-suppressed test data sheets, shown in Table 17.1.

11.1.4 The relative humidity may not change more than ±15 percent during the test runs. This is determined by recording the relative humidity in the vicinity of the test chamber at the beginning and end of an individual test run. This data is recorded on the test data sheets shown in Table 17.1.

11.1.5 Two plies of nominal 1.5 oz/ft$^2$ chopped strand mat (CSM) are cut into a square or rectangle with the minimum surface area of 60 square inches ( *i.e.* a square with a side dimension of 7.75 inches).

11.1.6 The appropriate resin application roller is readily available.

11.2 Resin Gel Time/Initiator Percentage

11.2.1 Previous testing has indicated that resin gel time influences the emissions from composite production. The testing indicated that longer the gel times led to higher emissions. There are a number of factors that influence gel time including initiator type, initiator brand, initiator level, temperature and resin additives. Under actual usage conditions a molder will adjust the initiator to meet a gel time requirement. In this test procedure, the vapor suppressed and non-vapor suppressed resin systems will be adjusted to the same gel time by selecting the appropriate initiator level for each.

11.2.2 All test runs within a test will be processed in a manner that produces the same resin gel time ±2 minutes. To facilitate the resin mixing procedure, master batches of resin and resin plus vapor suppressant of resin are prepared. These resin master batches will have all of the required ingredients except initiator; this includes filler for filled systems. The gel times for the tests are conducted using the master batch and adjustments to meet gel time requirements shall be made to the master batch before emission testing is conducted. Test temperatures must be maintained within the required range, during gel time testing. Further gel time testing is not required after the non-vapor suppressed and vapor suppressed master batches are established with gel times within ±2 minutes. A sufficient quantity of each resin should be prepared to allow for additional test specimens in the event one or more test fails to meet the data acceptance criteria discussed in Section 11.5 and shown in Table 17.2.

11.2.3 The specific brand of initiator and the nominal percentage level recommended by the resin manufacturer will be indicated on the resin certificate of analysis[15] ; or, if a unique gel time is required in a production laminate, initiator brand and percentage will be determined by that specific requirement.

11.2.4 Examples:

11.2.4.1 The resin for a test run is specified as having a 15-minute cup gel time at 77 °F using Brand X initiator at 1.5 percent by weight. The non-suppressed control resin has a 15-minute gel time. The suppressed resin has a gel time of 17-minutes. An initiator level of 1.5 percent would be selected for the both the non-suppressed and the suppressed test samples.

11.2.4.2 Based on a specific production requirement, a resin is processed in production using 2.25 percent of Brand Y initiator, which produces a 20-minute gel time. This initiator at level of 2.25 percent produces a 20 minute gel time for the non-suppressed control resin, but yields a 25-minute gel time for the suppressed resin sample. The suppressed resin is retested at 2.50 percent initiator and produces a 21-minute gel time. The initiator levels of 2.25 percent and 2.50 percent respectively would yield gel times within ±2 minutes.

11.3 Test Run Procedure for Unfilled Resin (see the data sheet shown in Table 17.1).

11.3.1 The insulating board is placed on the balance.

11.3.2 The aluminum pan with attached Mylar film is placed on the balance, and the balance is tared (weight reading set to zero with the plate on the balance.)

11.3.3 Place two plies of 1.5 oz. CSM on the balance and record the weight (glass weight).

11.3.4 The resin beaker and stirring rod are put on the second balance and tared.

11.3.5 The required resin weight and initiator weight are calculated (refer to calculation formulas in 12.2).

11.3.6 The disposable resin application roller is placed on the edge of the plate.

11.3.7 The balance is tared, with the aluminum pan, Mylar film, glass mat, and resin application roller on the balance pan.

11.3.8 Resin is weighed into a beaker, as calculated, using the second balance. The mixing stick should be tared with the beaker weight.

11.3.9 Initiator is weighed into the resin, as calculated, using an eyedropper or a pipette, and the combination is mixed.

11.3.10 Initiated resin is poured on chopped strand mat in a pe-determined pattern (see Figure 11.6).

11.3.11 A stopwatch is started from zero.

11.3.12 The initial laminate weight is recorded.

11.3.13 The plate is removed from balance to enable roll-out of the laminate.

11.3.14 The wet laminate is rolled with the resin application roller to completely distribute the resin, saturate the chopped strand mat, and eliminate air voids. Roll-out time should be in the range of 2 to 3[16] minutes and vary less than ±10 percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.3.15 Record the rollout end time (time from start to completion of rollout).

11.3.16 Place the resin application roller on the edge of the plate when rollout is completed.

11.3.17 Place the plate back on the balance pan. Immediately record the weight.

11.3.18 For the first test in a series of six tests, weight is recorded every 5-minute interval (suppressed and non-suppressed). The end of the test occurs when three consecutive equal weights are recorded or a weight gain is observed (the last weight before the increased weight is the end of test weight). For the remaining five tests in the series, after the initial weights are taken, the next weight is recorded 30 minutes before the end of the test, as suggested by the results from the first test. It is likely that the time to reach the end point of a suppressed resin test will be shorter than the time required to complete a non-suppressed test. Therefore, the time to start taking data manually may be different for suppressed and non-suppressed resins.

11.4 Test Run Procedures for Filled Resin Systems[17] Note that the procedure for filled systems differs from the procedure for unfilled systems. With filled systems, resin is applied to one ply of the CSM and the second ply is placed on top of the resin.

11.4.1 The insulating board is placed on the balance.

11.4.2 The aluminum pan with attached Mylar film is placed on the balance, and the balance is tared (weight reading set to zero with the plate on the balance.)

11.4.3 Place two plies of 1.5 oz. CSM on the balance and record the weight (glass weight).

11.4.4 Remove the top ply of fiberglass and record its weight (weight of 1st layer of glass).

11.4.5 The required resin weight and initiator weight are calculated (refer to calculation formulas in 12.2). Calculate the weight of filled resin and initiator based on the 2 layers of fiberglass.

11.4.6 The resin beaker and stirring rod are put on the second balance and tared.

11.4.7 A disposable resin application roller is placed on the edge of the plate.

11.4.8 The balance is tared, with the aluminum pan, Mylar film, glass mat, and resin application roller on the balance pan.

11.4.9 Resin is weighed into the beaker, as calculated, using the second balance. The mixing stick should be tared with the beaker weight.

11.4.10 Initiator is weighed into the resin, as calculated, using an eyedropper or a pipette, and the combination is mixed.

11.4.11 Initiated resin is poured on the single ply of CSM in a pre-determined pattern. Refer to Figure 11.6.

11.4.12 A stopwatch is started from zero.

11.4.13 Record the weight of the resin ans single ply of CSM ($L_1$). The initial laminate weight equals $L_1$plus the weight of second glass layer.

11.4.14 Replace the second layer of fiberglass.

11.4.15 Remove the plate from the balance to allow roll-out of the laminate.

11.4.16 Roll the wet laminate with the resin application roller to completely distribute the resin, saturate the chopped strand mat, and eliminate air voids. Roll-out time should be in the range of 2 to 3[16] minutes and vary less than ±10 percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.4.17 Record the roll-out end time (time from start to completion of rollout).

11.4.18 Place the resin application roller on the edge of the plate when rollout is completed.

11.4.19 Place the plate back on the balance pan. The initial weight is recorded immediately.

11.4.20 For the first test run in a series of six, weight is recorded at every 5-minute interval (suppressed and non-suppressed). The end of the test occurs when three consecutive equal weights are recorded or a weight gain is observed (the last weight before the increased weight is the end of test weight). For the remaining five tests in the series, after the initial weights are taken, the next weight is recorded 30 minutes before the end of the test, as suggested by the results from the first test. It is likely that the time to reach the end point of a suppressed resin test will be shorter than the time required to complete a non-suppressed test. Therefore, the time to start taking data manually may be different for suppressed and non-suppressed resins.

11.5 Data Acceptance Criteria:

11.5.1 A test set is designed as twelve individual test runs using the same resin, initiator, and gel time, six of the test runs use the resin non-vapor suppressed and the other six use it vapor suppressed.

11.5.2 If a test run falls outside any of the time, temperature, weight or humidity variation requirements, it must be discarded and run again.

11.5.3 The laminate roll out time for each individual test run must vary less than ±10 percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.5.4 Test temperature for each test run must be maintained within ±2 °F and the average must be between 70° and 80 °F. Refer to 11.1.3.

11.5.5 The difference in the amount of resin for each run must be within ±10 percent of the average weight for the complete set of six suppressed and six non-suppressed runs.

11.5.6 The relative humidity from each test run must be within ±15 percent of the average humidity for the complete set of six suppressed and six non-suppressed tests. Refer to 11.1.4

11.5.7 The glass content for each test set must be within ±10 percent of the average resin-to-/glass ratio for the complete set of six suppressed and six non-suppressed runs. Refer to 12.2).

11.5.8 The filler content for each test of a test set must be within ±5 percent of the average filler content for the complete set of six suppressed and six non-suppressed runs. Refer to 12.2.

11.6 Resin Application Pour Pattern:

11.6.1 To facilitate the distribution of resin across the chopped strand mat, and to provide consistency from test to test, a uniform pour pattern should be used. A typical pour pattern is shown below:

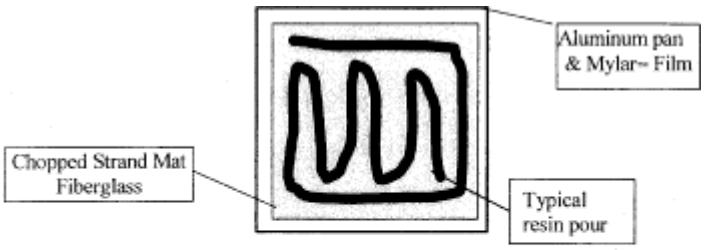


Figure 11.6 Resin Distribution Diagram

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11.6.2 The resin is to be evenly distributed across the entire surface of the chopped strand mat using the resin application roller to achieve a wet look across the surface of the laminate. Pushing excess resin off the reinforcement and onto the Mylar sheet should be avoided. No resin is to be pushed more than1/2inch beyond the edge of the glass mat. If excess resin is pushed further from the glass mat, it will void the test run. As part of this process, typical visible air voids are to be eliminated by the rollout process. If the pour pattern is different from the above, it must be recorded and attached to test data sheet 17.1.

*12. Data Analysis and Calculations*

12.1 Data Analysis:

This test method requires a simple mass balance calculation, no special data analysis is necessary.

12.2 Calculations:

12.2.1 The target glass content (percent) for unfilled resin systems is determined from the specific production parameters being evaluated. In absence of any specific production requirements the target may be set at the tester's discretion.

12.2.2 Glass content determination (expressed as a per cent):

% Glass = Glass wt(g)/(Glass wt(g) + Resin weight (g))

12.2.3 Weight of resin required:

Resin weight required = (Glass wt (g)/% glass)—Glass wt (g)

12.2.4 Filled resin formulation determination for filled resin systems ( *e.g.* >30 percent filler by weight for a particulate filler, or >1 percent by weight for a lightweight filler, such as hollow microspheres):

% Resin content = resin

weight(g)/(resin weight(g) + glass

weight(g) + filler weight(g))

% Glass content = glass

weight(g)/(resin weight(g) + glass

weight(g) + filler weight(g))

Filler content = filler

weight(g)/(resin weight(g) + glass

weight(g) + filler weight(g))

12.2.5 Initiator weight determination:

Initiator weight (g) = Resin weight(g) × Initiator %

12.2.6 Emission weight loss determination:

Emissions weight loss (g) = Initial resin weight (g)−Final resin weight (g)

12.2.7 % Emission weight loss:

% Emission Weight Loss = (Emission weight loss (g) Initial resin weight (g) × 100

12.2.8 Average % Emission Weight Loss (assuming six test runs):

$$Average\ \%\ \text{Emission Weight Loss} = \sum_{i}^{N=6} (\%\ \text{Emission Weight Loss}_i)/6$$

12.2.9 VSE Factor calculation:

VSE Factor = 1 −(Average % VS Emission Weight Loss/Average NVS Emission Weight Loss)

**Table 12.1—Example Calculation**

| Test # | % VS weight loss | % NVS weight loss |
|---|---|---|
| 1 | 6.87 | 10.86 |
| 2 | 6.76 | 11.23 |
| 3 | 5.80 | 12.02 |
| 4 | 5.34 | 11.70 |
| 5 | 6.11 | 11.91 |
| 6 | 6.61 | 10.63 |
| Average Weight Loss | 6.25 | 11.39 |
| VSE Factor | | 0.4 |

VSE Factor = 0.45

VSE Factor is used as input into the appropriate equation in Table 1 to this subpart.

Example from Table 1 to this subpart:

Manual Resin Application, 35 percent HAP resin, VSE Factor of 0.45

HAP Emissions with vapor suppresants = ((0.286 × %HAP)−0.0529) × 2000 × (1–(0.5 × VSE factor))

HAP Emissions with vapor suppresants = ((0.286 × .35)−0.0529) × 2000 × (1−(0.5 × .45))

HAP Emissions with vapor suppresants = 73 pounds of HAP emissions per ton of resin.

*13. Method Performance*

13.1 Bias:

The bias of this test method has not been determined.

13.2 Precision Testing

13.2.1 Subsequent to the initial development of this test protocol by the Composites Fabricators Association, a series of tests were conducted in three different laboratory facilities. The purpose of this round robin testing was to verify the precision of the test method in various laboratories. Each laboratory

received a sample of an orthophthalic polyester resin from the same production batch, containing 48 per cent styrene by weight. Each testing site was also provided with the same vapor suppressant additive. The suppressant manufacturer specified the percentage level of suppressant additive. The resin manufacturer specified the type and level of initiator required to produce a 20 minute gel time. The target glass content was 30 percent by weight.

13.2.2 Each laboratory independently conducted the VSE test according to this method. A summary of the results is included in Table 13.1.

**Table 13.1—Round Robin Testing Results**

| | **Test Lab 1** | | **Test Lab 2** | | **Test Lab 3** | |
|---|---|---|---|---|---|---|
| | **NVS** | **VS** | **NVS** | **S** | **NVS** | **VS** |
| Average percent WT Loss | 4.24 | 1.15 | 4.69 | 1.84 | 5.73 | 1.61 |
| Standard Deviation | 0.095 | 0.060 | 0.002 | 0.002 | 0.020 | 0.003 |
| VSE Factor | | 0.730 | | 0.607 | | 0.720 |

13.3 Comparison to EPA Reference Methods This test has no corresponding EPA reference method.

*14. Pollution Prevention*

The sample size used in this method produces a negligible emission of HAP, and has an insignificant impact upon the atmosphere.

*15. Waste Management*

The spent and waste materials generated during this test are disposed according to required facility procedures, and waste management recommendations on the corresponding material safety data sheets.

*16. References and footnotes*

16.1 Footnotes:

[1] Balance Enclosure—The purpose of the balance enclosure is to prevent localized airflow from adversely affecting the laboratory balance. The enclosure may be a simple three-sided box with a top and an open face. The configuration of the enclosure is secondary to the purpose of providing a stable and steady balance reading, free from the effects of airflow, for accurate measurements. The enclosure can be fabricated locally. A typical enclosure is shown in Figure 17.1.

[2] Laboratory Balance—Ohaus Precision Standard Series P/N TS400D or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

[3] Stop Watch—Local supply.

[4] Thermometer—Mercury thermometer—ASTM No. 21C or equivalent; Digital thermometer—P/N TH–33033 or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

[5] Aluminum Pan—Local supply.

[6] Mylar—Local supply.

[7] Double Sided Tape—3M Double Stick Tape or equivalent, local supply.

[8] Laboratory Beakers—250 to 400ml capacity—Local laboratory supply.

[9] Eye Dropper or Pipette—Local laboratory supply.

[10] Disposable Resin Application Roller Source—Wire Handle Roller P/N 205–050–300 or Plastic Handle Roller P/N 215–050–300 or equivalent; ES Manufacturing Inc., 2500 26st Ave. North, St. Petersburg, FL 33713, *www.esmfg.com,* or other source. Refer to Figure 17.3.

[11] Hygrometer or Psychrometer—Model# THWD–1, or equivalent—Part # 975765 by Amprobe Instrument, 630 Merrick Road, P.O. Box 329, Lynbrook, NY 11563, 516–593–5600

[12] Insulating Board (Teflon, cardboard, foam board etc.)—Local supply.

[13] Laboratory Balance With Digital Output—Ohaus Precision Standard Series P/N TS120S or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

[14] Chopped Strand Mat—1.5 oz/ft$^2$ Sources: Owens Corning Fiberglas—Fiberglas M–723; PPG Industries—ABM HTX; Vetrotex America—M–127 or equivalent.

[15] Certificate of Analysis: Resin gel time, as recorded on the resin certificate of analysis, is measured using a laboratory standard gel time procedure. This procedure typically uses a 100 gram cup sample at 77 °F (25 °C), a specific type of initiator and a specified percentage.

[16] Roll-out times may vary with resin viscosity or resin additive. The important aspect of this step is to produce the same roll-out time for both the suppressed and non-suppressed samples.

[17] While this test can be used with filled resin systems, the test is not designed to determine the effect of the filler on emissions, but rather to measure the effect of the suppressant additive in the resin system. When evaluating a filled system both the non-vapor suppressed and vapor suppressed samples should be formulated with the same type and level of filler.

16.2 References

1. Phase 1—Baseline Study Hand Lay-up, CFA, 1996

2. CFA Vapor Suppressant Effectiveness Test Development, 4/3/98, correspondence with Dr. Madeleine Strum, EPA, OAQPS

3. CFA Vapor Suppressant Effectiveness Screening Tests, 4/4/98

4. Styrene Suppressant Systems Study, Reichhold Chemical, 11/30/98

5. Evaluation of the CFA's New Proposed Vapor Suppressant Effectiveness Test, Technical Service Request #: ED–01–98, BYK Chemie, 6/3/98

6. Second Evaluation of the CFA's New Proposed Vapor Suppressant Effectiveness Test, Technical Service Request #: ED–02–98, BYK Chemie, 1/26/99

*17. Data Sheets and Figures*

17.1 This data sheet, or a similar data sheet, is used to record the test data for filled, unfilled, suppressed and non-suppressed tests. If additional time is required, the data sheet may be extended.

Table 17.1 Test Data Sheet

| Test Number | | | Test Type | | |
|---|---|---|---|---|---|
| | | | VS (_____) | | NVS (_____) |
| Resin | | | Filled (____) | | Unfilled (___) |
| Initiator | | | | Initiator, % | _____ |
| Vapor Suppressant | | | | VS, % | _____ |
| Weight of 2 layers of glass, g | _____ | Weight of 1st glass layer, g | _____ | Weight of 2nd glass layer, g | _____ |
| Initial Resin Weight, (g) | | | Time (Min.) | Weight g | Temp °F |
| Glass content, (%) | | | 55 | | |
| Initial Temperature °F: | | | 60 | | |
| Initial Humidity % | | | 65 | | |
| Resin Initiator Level, % | | | 70 | | |
| Resin gel time, (min.) | | | 75 | | |
| Resin filler content, % | | | 80 | | |
| Roll out time, (min.) | | | 85 | | |
| Time, (min.) | Weight, g | Temp, °F | 90 | | |

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| | | | | | |
|---|---|---|---|---|---|
| Initial | | | 95 | | |
| | | | 100 | | |
| 0 | | | 105 | | |
| 5 | | | 110 | | |
| 10 | | | 115 | | |
| 15 | | | 120 | | |
| 20 | | | 125 | | |
| 25 | | | 130 | | |
| 30 | | | 135 | | |
| 35 | | | 140 | | |
| 40 | | | 145 | | |
| 45 | | | 150 | | |
| 50 | | | 155 | | |
| | | | | | |
| Final Time, min. | Final Weight, g. | | Final Temp, °F | Final Humidity, % | |
| | | | | | |

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17.2 Data Acceptance Criteria Worksheet:

The following worksheet is used to determine the quality of collected data ( *i.e.* insure the data collected all meets acceptance criteria)

**Table 17.2—Data Acceptance Criteria Worksheet**

| Test No. | Temperature | | | Laminate roll out time, min | Relative humidity, % | | Resin weight, (g) | Glass content, % | Resin distribution | Meets criteria Y/N |
|---|---|---|---|---|---|---|---|---|---|---|
| | Min | Max | Delta | | Initial | Final | | | | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| Average | | | | | | | | | | |
| Criteria | ±2 °F | ±10% of Average | ±15 of Average | ±15 of Average | ±10% of Avg. | ±10% of Avg. | < 1/2 inch off mat | All Y | | |

17.3 VSE Factor Calculation

**Table 17.3—Calculations Worksheet**

| **Vapor suppressed** | | **Non-vapor suppressed** | |
|---|---|---|---|
| **Test #** | **% Weight loss** | **Test #** | **% Weight loss** |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Average Weight Loss | | | |
| VSE Factor | | | |

VSE Factor = 1—(% Average Weight $Loss_{VS}$/ % Average Weight $Loss_{NVS}$)

17.4 Figures

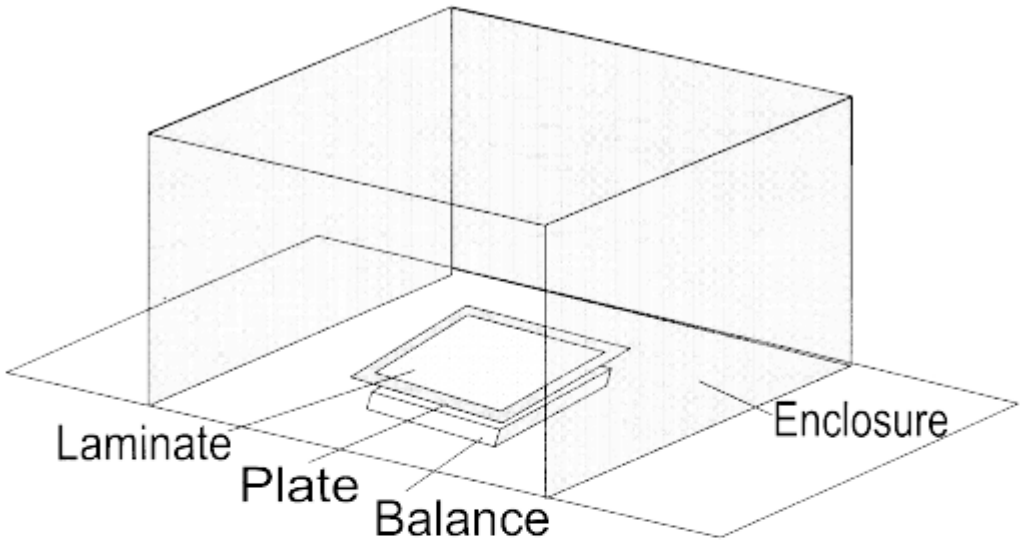


Figure 17.1. Typical Balance Enclosure

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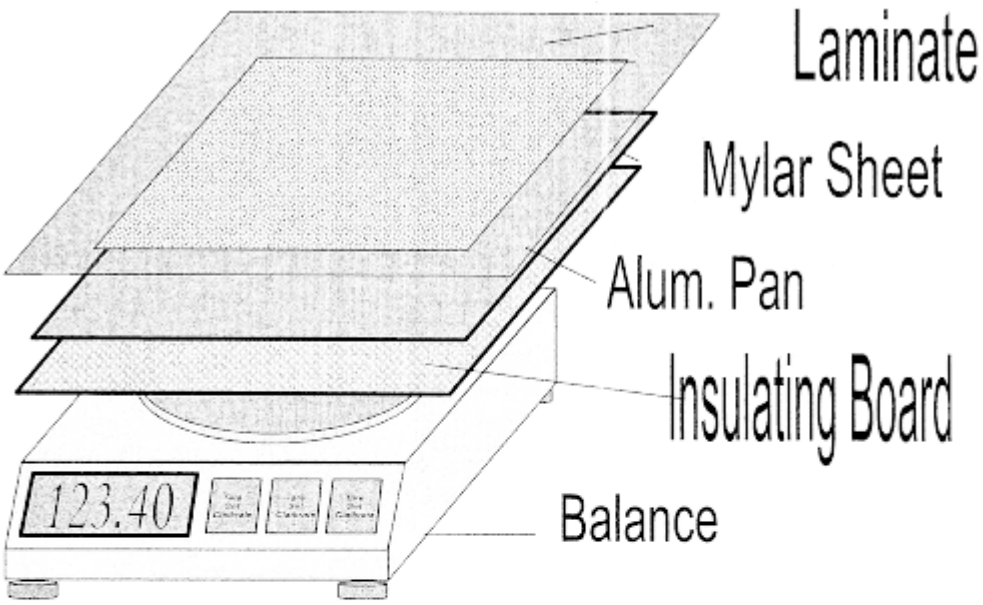


Figure 17.2. Scale, Plate, Insulating Board, Mylar, Laminate Order

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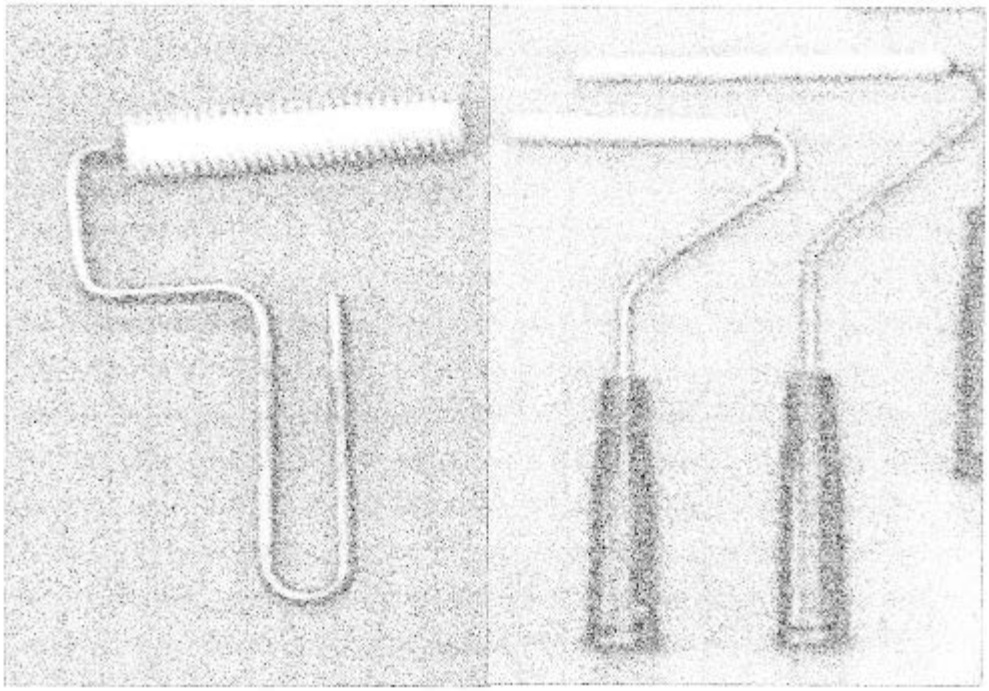

FRP Rollers

Figure 17.3. Typical FRP Rollers

**Attachment B**

**to Part 70 Operating Permit Renewal No. T033-30711-00019**

Therma Tru Corporation
601 RE Jones Road
Butler, Indiana 46721

# Title 40: Protection of Environment

## 40 CFR 63, 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.

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

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.

$Limit_i$= 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.

$Solids_i$= 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:

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

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 §63.3981, 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:

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

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:

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

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:

$$H_{UNC} = \sum_{k=1}^{q} (Vol_k)(D_k)(W_k) \qquad (Eq.\ 1D)$$

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:

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

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 |

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| | | 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 §63.3967(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 | |
| §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. |

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| §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). |
| §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 |

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| | | | 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. |
| §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)– | Use of an Alternative Monitoring | Yes | |

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| (5) | Method | | |
| §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. |

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| §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. |

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| 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 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 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.

**Attachment C**

**to Part 70 Operating Permit Renewal No. T033-30711-00019**

Therma Tru Corporation
601 RE Jones Road
Butler, Indiana 46721

# Title 40: Protection of Environment

## 40 CFR 63, 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:

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

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 §63.4581, 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:

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

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.

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

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:

$$B_{CSR} = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \quad (Eq.\ 3B)$$

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 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:

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

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 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 |

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| | | 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 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 |

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| | | 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 |

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| | | | 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 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). |

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| §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)– | Continuous Monitoring Systems | Yes | Applies only to monitoring of |

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| (3) | (CMS) Operation and Maintenance | | 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 §63.4568. |
| §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. |

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| §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)(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 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). |

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| §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. | |
| §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. |

| | | | |
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| 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 of1/8inch 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,1/8inch 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 D**

**to Part 70 Operating Permit Renewal No. T033-30711-00019**

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## 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

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

### What This Subpart Covers

### § 63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

### § 63.6585 Am I subject to this subpart?

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

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

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

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

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

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

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

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

(2) *New stationary RICE.*

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

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

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

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

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

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

(b) *Stationary RICE subject to limited requirements.*

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

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

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

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c),

63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source of HAP emissions; an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions; an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE; an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE; an existing compression ignition emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing spark ignition emergency or limited use stationary RICE; an existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; or an existing stationary residential, commercial, or institutional emergency stationary RICE located at an area source of HAP emissions, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

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

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

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

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

## Emission and Operating Limitations

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

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

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

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

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

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

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

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

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

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

[75 FR 9675, Mar. 3, 2010]

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

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

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

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

[75 FR 9675, Mar. 3, 2010]

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

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

[75 FR 9675, Mar. 3, 2010]

## General Compliance Requirements

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

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

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

[75 FR 9675, Mar. 3, 2010]

## Testing and Initial Compliance Requirements

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

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

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

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

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

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

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

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

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

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

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

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

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

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

[73 FR 3605, Jan. 18, 2008]

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

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

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

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

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

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

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

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

[75 FR 9676, Mar. 3, 2010]

### § 63.6615 When must I conduct subsequent performance tests?

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

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

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

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do

not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

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

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

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

Where:

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

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

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide ($CO_2$). If pollutant concentrations are to be corrected to 15 percent oxygen and $CO_2$concentration is measured in lieu of oxygen concentration measurement, a $CO_2$correction factor is needed. Calculate the $CO_2$correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

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

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

Where:

$F_o$= Fuel factor based on the ratio of oxygen volume to the ultimate $CO_2$volume produced by the fuel at zero percent excess air.

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

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

$F_c$= Ratio of the volume of $CO_2$produced to the gross calorific value of the fuel from Method 19, $dsm^3$ /J (dscf/$10^6$ Btu).

(ii) Calculate the $CO_2$correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

$X_{co2}$= $CO_2$correction factor, percent.

5.9 = 20.9 percent $O_2$−15 percent $O_2$, the defined $O_2$correction value, percent.

(iii) Calculate the $NO_X$and $SO_2$gas concentrations adjusted to 15 percent $O_2$using $CO_2$as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

%$CO_2$= Measured $CO_2$concentration measured, dry basis, percent.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or $CO_2$at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

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

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

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

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent $CO_2$concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.

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

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

(e) If you own or operate an existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions, an existing stationary emergency RICE, or an existing stationary RICE located at an area source of HAP emissions not subject to any numerical emission standards shown in Table 2d to this subpart, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) in this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary engine that is subject to the work, operation or management practices in items 1, 2, or 4 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010]

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

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

## Continuous Compliance Requirements

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

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

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

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

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

(c) [Reserved]

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

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

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing

emergency stationary RICE located at an area source of HAP emissions, you must operate the engine according to the conditions described in paragraphs (f)(1) through (4) of this section.

(1) For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

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

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

(4) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(4), as long as the power provided by the financial arrangement is limited to emergency power.

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

## Notifications, Reports, and Records

### § 63.6645 What notifications must I submit and when?

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

(1) An existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary CI RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary CI RICE less than 100 HP, an existing stationary emergency CI RICE, or an existing stationary CI RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

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

### § 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

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

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

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

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

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

(1) Company name and address.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

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

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

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

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

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

## § 63.6655 What records must I keep?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) An existing stationary emergency CI RICE.

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

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

response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

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

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

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

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

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

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

## Other Requirements and Information

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

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

[75 FR 9678, Mar. 3, 2010]

### § 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

## § 63.6675 What definitions apply to this subpart?

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

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

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

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

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

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

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

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

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

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

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

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and $CO_2$.

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

*Emergency stationary RICE* means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, *etc.* Stationary CI ICE used for peak shaving are not considered emergency stationary ICE. Stationary CI ICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. All other emergency stationary RICE must comply with the requirements specified in §63.6640(f).

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

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

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

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

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

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

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

*Landfill gas* means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and $CO_2$.

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

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

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

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

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

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

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

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

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

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

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

*Non-selective catalytic reduction (NSCR)* means an add-on catalytic nitrogen oxides ($NO_X$) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, $NO_X$, CO, and volatile organic compounds (VOC) into $CO_2$, nitrogen, and water.

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

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

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

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

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

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

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

*Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3H_8$.

*Residential/commercial/institutional emergency stationary RICE* means an emergency stationary RICE used in residential establishments such as homes or residences, commercial establishments such as office buildings, hotels, or stores, or institutional establishments such as medical centers, research centers, and institutions of higher education.

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

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

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

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

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

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

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

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

*Subpart* means 40 CFR part 63, subpart ZZZZ.

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

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

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

**Table 1ato Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE at 100 percent load plus or minus 10 percent:

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. 4SRB stationary RICE | a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1] |
| | b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010]

**Table 1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

[As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

| For each... | You must meet the following operating limitation... |
|---|---|
| 1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 |

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| percent or more, if applicable) and using NSCR;<br>or | percent from the pressure drop across the catalyst measured during the initial performance test; and |
| 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and using NSCR. | b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. |
| 2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR;<br>or | Comply with any operating limitations approved by the Administrator. |
| 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and not using NSCR. | |

[73 FR 3607, Jan. 18, 2008]

**Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. 2SLB stationary RICE | a. Reduce CO emissions by 58 percent or more; or<br>b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent $O_2$. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent $O_2$until June 15, 2007 | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1] |
| 2. 4SLB | a. Reduce CO emissions by 93 percent or | |

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| stationary RICE | more; or | |
| | b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent $O_2$ | |
| 3. CI stationary RICE | a. Reduce CO emissions by 70 percent or more; or | |
| | b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent $O_2$ | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

**Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, Existing Non-Emergency Compression Ignition Stationary RICE >500 HP, and New and Reconstructed 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and existing, new and reconstructed compression ignition stationary RICE:

| For each . . . | You must meet the following operating limitation . . . |
|---|---|
| 1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst | a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and |
| | b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1] |
| 2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the | Comply with any operating limitations approved by the Administrator. |

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| requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 9680, Mar. 3, 2010]

**Table 2cto Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary Rice Located at Major Sources of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE:

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. Emergency CI and black start CI.[1] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2]<br>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3] |
| 2. Non-Emergency, non-black start CI < 100 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2] | |
| | b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; | |
| | c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as | |

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| | necessary.[3] | |
| 3. Non-Emergency, non-black start CI RICE 100≤HP≤300 HP | Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent $O_2$. | |
| 4. Non-Emergency, non-black start CI 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent $O_2$; or | |
| | b. Reduce CO emissions by 70 percent or more. | |
| 5. Non-Emergency, non-black start CI>500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent $O_2$; or | |
| | b. Reduce CO emissions by 70 percent or more. | |

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9681, Mar. 3, 2010]

**Table 2dto Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at Area Sources of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission and operating limitations for existing compression ignition stationary RICE:

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. Non-Emergency, non- | a. Change oil and filter every 1,000 hours of operation or | |

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| black start CI ≤ 300 HP | annually, whichever comes first;[1] | |
| | b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. |
| | c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary | |
| 2. Non-Emergency, non-black start CI 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent $O_2$; or | |
| | b. Reduce CO emissions by 70 percent or more | |
| 3. Non-Emergency, non-black start CI > 500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent $O_2$; or | |
| | b. Reduce CO emissions by 70 percent or more | |
| 4. Emergency CI and black start CI.[2] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and | |
| | c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary | |

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[75 FR 9681, Mar. 3, 2010]

**Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests**

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

| For each . . . | Complying with the requirement to . . . | You must . . . |
|---|---|---|
| 1. 2SLB and 4SLB stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources | Reduce CO emissions and not using a CEMS | Conduct subsequent performance tests semiannually.[1] |
| 2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources | Reduce formaldehyde emissions | Conduct subsequent performance tests semiannually.[1] |
| 3. Stationary RICE with a brake horsepower >500 located at major sources | Limit the concentration of formaldehyde in the stationary RICE exhaust | Conduct subsequent performance tests semiannually.[1] |
| 4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE | Limit or reduce CO or formaldehyde emissions | Conduct subsequent performance tests every 8,760 hrs or 3 years, whichever comes first. |
| 5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE | | Conduct subsequent performance tests every 8,760 hrs or 5 years, whichever comes first. |

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 9682, Mar. 3, 2010]

**Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests**

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE for existing sources:

| For each . . . | Complying with the requirement to . . . | You must . . . | Using . . . | According to the following requirements . . . |
|---|---|---|---|---|
| 1. 2SLB, 4SLB, and CI stationary RICE | a. Reduce CO emissions | i. Measure the $O_2$at the inlet and outlet of the control device; and | (1) Portable CO and $O_2$analyzer. | (a) Using ASTM D6522–00 (2005)[a](incorporated by reference, *see* §63.14). Measurements to determine $O_2$must be made at the same time as the measurements for CO concentration. |
| | | ii. Measure the CO at the inlet and the outlet of the control device | (1) Portable CO and $O_2$analyzer. | (a) Using ASTM D6522–00 (2005)[a,b](incorporated by reference, *see* §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent $O_2$, dry basis. |
| 2. 4SRB stationary RICE | a. Reduce formaldehyde emissions | i. Select the sampling port location and the number of traverse points; and | (1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i) | (a) Sampling sites must be located at the inlet and outlet of the control device. |
| | | ii. Measure $O_2$at the inlet and outlet of the control device; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005) | (a) Measurements to determine $O_2$concentration must be made at the same time as the measurements for formaldehyde concentration. |
| | | iii. Measure moisture content at the inlet and outlet of the control device; and | (1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration. |
| | | iv. Measure formaldehyde at | (1) Method 320 of 40 CFR part 63, | (a) Formaldehyde concentration must be at |

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| | | the inlet and the outlet of the control device. | appendix A; or ASTM D6348–03[c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130. | 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| 3. Stationary RICE | a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. Select the sampling port location and the number of traverse points; and | (1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i) | (a) If using a control device, the sampling site must be located at the outlet of the control device. |
| | | ii. Determine the $O_2$concentration of the stationary RICE exhaust at the sampling port location; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005) | (a) Measurements to determine $O_2$concentration must be made at the same time and location as the measurements for formaldehyde concentration. |
| | | iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and | (1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration. |
| | | iv. Measure formaldehyde at the exhaust of the stationary RICE; or | (1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03[c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130 | (a) Formaldehyde concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |

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| | | v. Measure CO at the exhaust of the stationary RICE. | (1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 | (a) CO concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour longer runs. |

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b]You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 9682, Mar. 3, 2010]

**Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations**

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source | a. Reduce CO emissions and using oxidation catalyst, and using a CPMS | i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 2. 2SLB and 4SLB stationary RICE >500 HP located at a | a. Reduce CO emissions and not | i. The average reduction of emissions of CO determined from the initial |

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| major source and new or reconstructed CI stationary RICE >500 HP located at a major source | using oxidation catalyst | performance test achieves the required CO percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source | a. Reduce CO emissions, and using a CEMS | i. You have installed a CEMS to continuously monitor CO and either $O_2$or $CO_2$at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and |
| | | ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and |
| | | iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period. |
| 4. 4SRB stationary RICE >500 HP located at a major source | a. Reduce formaldehyde emissions and using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet |

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| | | temperature during the initial performance test. |
| 5. 4SRB stationary RICE >500 HP located at a major source | a. Reduce formaldehyde emissions and not using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 6. Stationary RICE >500 HP located at a major source | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 7. Stationary RICE >500 HP located at a major source | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the |

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| | | requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 8. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source | a. Reduce CO or formaldehyde emissions | i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction. |
| 9. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source | a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable. |

[75 FR 9684, Mar. 3, 2010]

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations and Operating Limitations**

As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following:

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| 1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source | a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and |
| | | ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |

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| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source | a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and |
| | | ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source | a. Reduce CO emissions and using a CEMS | i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and |
| | | ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and |
| | | iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1. |
| 4. 4SRB stationary RICE >500 HP located | a. Reduce formaldehyde emissions and using | i. Collecting the catalyst inlet temperature data according to §63.6625(b); and |

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| at a major source | NSCR | |
| | | ii. reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 5. 4SRB stationary RICE >500 HP located at a major source | a. Reduce formaldehyde emissions and not using NSCR | i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | ii. Reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 6. 4SRB stationary RICE with a brake HP ≥5,000 located at a major source | Reduce formaldehyde emissions | Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a] |
| 7. Stationary RICE >500 HP located at a major source | Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and |
| | | ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that |

| | | |
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| | | the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 8. Stationary RICE >500 HP located at a major source | Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and |
| | | ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 9. Existing stationary CI RICE not subject to any numerical emission limitations | a. Work or Management practices | i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or |
| | | ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. |
| 10. Existing stationary RICE >500 HP that are not limited use stationary RICE, except 4SRB >500 HP located at major sources | a. Reduce CO or formaldehyde emissions; or<br>b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit. |
| 11. Existing limited use stationary RICE >500 HP that are limited use CI stationary RICE | a. Reduce CO or formaldehyde emissions; or<br>b. Limit the concentration of formaldehyde or CO in | i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions |

| | | |
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| | the stationary RICE exhaust | remain at or below the CO or formaldehyde concentration limit. |

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 9685, Mar. 3, 2010]

**Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports**

As stated in §63.6650, you must comply with the following requirements for reports:

| You must submit a(n) . . . | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| 1. Compliance report | a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or | i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary CI RICE subject to numerical emission limitations; and<br>ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary CI RICE subject to numerical emission limitations. |
| | b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or | i. Semiannually according to the requirements in §63.6650(b). |
| | c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4). | i. Semiannually according to the requirements in §63.6650(b). |
| 2. Report | a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 | i. Annually, according to the requirements in §63.6650. |

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| | percent or more of the gross heat input on an annual basis; and | |
| | b. The operating limits provided in your Federally enforceable permit, and any deviations from these limits; and | i. *See* item 2.a.i. |
| | c. Any problems or errors suspected with the meters | i. *See* item 2.a.i. |

[75 FR 9687, Mar. 3, 2010]

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.**

As stated in §63.6665, you must comply with the following applicable general provisions.

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.1 | General applicability of the General Provisions | Yes. | |
| §63.2 | Definitions | Yes | Additional terms defined in §63.6675. |
| §63.3 | Units and abbreviations | Yes. | |
| §63.4 | Prohibited activities and circumvention | Yes. | |
| §63.5 | Construction and reconstruction | Yes. | |
| §63.6(a) | Applicability | Yes. | |
| §63.6(b)(1)–(4) | Compliance dates for new and reconstructed sources | Yes. | |
| §63.6(b)(5) | Notification | Yes. | |
| §63.6(b)(6) | [Reserved] | | |
| §63.6(b)(7) | Compliance dates for new and reconstructed area sources that become major sources | Yes. | |
| §63.6(c)(1)–(2) | Compliance dates for existing sources | Yes. | |
| §63.6(c)(3)–(4) | [Reserved] | | |

| | | | |
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| §63.6(c)(5) | Compliance dates for existing area sources that become major sources | Yes. | |
| §63.6(d) | [Reserved] | | |
| §63.6(e) | Operation and maintenance | No. | |
| §63.6(f)(1) | Applicability of standards | No. | |
| §63.6(f)(2) | Methods for determining compliance | Yes. | |
| §63.6(f)(3) | Finding of compliance | Yes. | |
| §63.6(g)(1)–(3) | Use of alternate standard | Yes. | |
| §63.6(h) | Opacity and visible emission standards | No | Subpart ZZZZ does not contain opacity or visible emission standards. |
| §63.6(i) | Compliance extension procedures and criteria | Yes. | |
| §63.6(j) | Presidential compliance exemption | Yes. | |
| §63.7(a)(1)–(2) | Performance test dates | Yes | Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612. |
| §63.7(a)(3) | CAA section 114 authority | Yes. | |
| §63.7(b)(1) | Notification of performance test | Yes | Except that §63.7(b)(1) only applies as specified in §63.6645. |
| §63.7(b)(2) | Notification of rescheduling | Yes | Except that §63.7(b)(2) only applies as specified in §63.6645. |
| §63.7(c) | Quality assurance/test plan | Yes | Except that §63.7(c) only applies as specified in §63.6645. |
| §63.7(d) | Testing facilities | Yes. | |
| §63.7(e)(1) | Conditions for conducting performance tests | No. | Subpart ZZZZ specifies conditions for conducting performance tests at |

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| | | | §63.6620. |
| §63.7(e)(2) | Conduct of performance tests and reduction of data | Yes | Subpart ZZZZ specifies test methods at §63.6620. |
| §63.7(e)(3) | Test run duration | Yes. | |
| §63.7(e)(4) | Administrator may require other testing under section 114 of the CAA | Yes. | |
| §63.7(f) | Alternative test method provisions | Yes. | |
| §63.7(g) | Performance test data analysis, recordkeeping, and reporting | Yes. | |
| §63.7(h) | Waiver of tests | Yes. | |
| §63.8(a)(1) | Applicability of monitoring requirements | Yes | Subpart ZZZZ contains specific requirements for monitoring at §63.6625. |
| §63.8(a)(2) | Performance specifications | Yes. | |
| §63.8(a)(3) | [Reserved] | | |
| §63.8(a)(4) | Monitoring for control devices | No. | |
| §63.8(b)(1) | Monitoring | Yes. | |
| §63.8(b)(2)–(3) | Multiple effluents and multiple monitoring systems | Yes. | |
| §63.8(c)(1) | Monitoring system operation and maintenance | Yes. | |
| §63.8(c)(1)(i) | Routine and predictable SSM | Yes. | |
| §63.8(c)(1)(ii) | SSM not in Startup Shutdown Malfunction Plan | Yes. | |
| §63.8(c)(1)(iii) | Compliance with operation and maintenance requirements | Yes. | |
| §63.8(c)(2)–(3) | Monitoring system installation | Yes. | |
| §63.8(c)(4) | Continuous monitoring system (CMS) requirements | Yes | Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS). |

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| §63.8(c)(5) | COMS minimum procedures | No | Subpart ZZZZ does not require COMS. |
| §63.8(c)(6)–(8) | CMS requirements | Yes | Except that subpart ZZZZ does not require COMS. |
| §63.8(d) | CMS quality control | Yes. | |
| §63.8(e) | CMS performance evaluation | Yes | Except for §63.8(e)(5)(ii), which applies to COMS. |
| | | Except that §63.8(e) only applies as specified in §63.6645. | |
| §63.8(f)(1)–(5) | Alternative monitoring method | Yes | Except that §63.8(f)(4) only applies as specified in §63.6645. |
| §63.8(f)(6) | Alternative to relative accuracy test | Yes | Except that §63.8(f)(6) only applies as specified in §63.6645. |
| §63.8(g) | Data reduction | Yes | Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640. |
| §63.9(a) | Applicability and State delegation of notification requirements | Yes. | |
| §63.9(b)(1)–(5) | Initial notifications | Yes | Except that §63.9(b)(3) is reserved. |
| | | Except that §63.9(b) only applies as specified in §63.6645. | |
| §63.9(c) | Request for compliance extension | Yes | Except that §63.9(c) only applies as specified in §63.6645. |
| §63.9(d) | Notification of special | Yes | Except that §63.9(d) only |

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| | compliance requirements for new sources | | applies as specified in §63.6645. |
| §63.9(e) | Notification of performance test | Yes | Except that §63.9(e) only applies as specified in §63.6645. |
| §63.9(f) | Notification of visible emission (VE)/opacity test | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(1) | Notification of performance evaluation | Yes | Except that §63.9(g) only applies as specified in §63.6645. |
| §63.9(g)(2) | Notification of use of COMS data | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(3) | Notification that criterion for alternative to RATA is exceeded | Yes | If alternative is in use. |
| | | Except that §63.9(g) only applies as specified in §63.6645. | |
| §63.9(h)(1)–(6) | Notification of compliance status | Yes | Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved. |
| | | | Except that §63.9(h) only applies as specified in §63.6645. |
| §63.9(i) | Adjustment of submittal deadlines | Yes. | |
| §63.9(j) | Change in previous information | Yes. | |
| §63.10(a) | Administrative provisions for recordkeeping/reporting | Yes. | |
| §63.10(b)(1) | Record retention | Yes. | |

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| §63.10(b)(2)(i)–(v) | Records related to SSM | No. | |
| §63.10(b)(2)(vi)–(xi) | Records | Yes. | |
| §63.10(b)(2)(xii) | Record when under waiver | Yes. | |
| §63.10(b)(2)(xiii) | Records when using alternative to RATA | Yes | For CO standard if using RATA alternative. |
| §63.10(b)(2)(xiv) | Records of supporting documentation | Yes. | |
| §63.10(b)(3) | Records of applicability determination | Yes. | |
| §63.10(c) | Additional records for sources using CEMS | Yes | Except that §63.10(c)(2)–(4) and (9) are reserved. |
| §63.10(d)(1) | General reporting requirements | Yes. | |
| §63.10(d)(2) | Report of performance test results | Yes. | |
| §63.10(d)(3) | Reporting opacity or VE observations | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.10(d)(4) | Progress reports | Yes. | |
| §63.10(d)(5) | Startup, shutdown, and malfunction reports | No. | |
| §63.10(e)(1) and (2)(i) | Additional CMS Reports | Yes. | |
| §63.10(e)(2)(ii) | COMS-related report | No | Subpart ZZZZ does not require COMS. |
| §63.10(e)(3) | Excess emission and parameter exceedances reports | Yes. | Except that §63.10(e)(3)(i)(C) is reserved. |
| §63.10(e)(4) | Reporting COMS data | No | Subpart ZZZZ does not require COMS. |
| §63.10(f) | Waiver for recordkeeping/reporting | Yes. | |
| §63.11 | Flares | No. | |

| | | | |
|---|---|---|---|
| §63.12 | State authority and delegations | Yes. | |
| §63.13 | Addresses | Yes. | |
| §63.14 | Incorporation by reference | Yes. | |
| §63.15 | Availability of information | Yes. | |

**Attachment E**

**to Part 70 Operating Permit Renewal No. T033-30711-00019**

Therma Tru Corporation
601 RE Jones Road
Butler, Indiana 46721

## 40 CFR 60, Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

**Source:** 71 FR 39172, July 11, 2006, unless otherwise noted.

### What This Subpart Covers

### § 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

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

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

### Emission Standards for Manufacturers

## § 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

## § 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

### § 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

## Emission Standards for Owners and Operators

### § 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides ($NO_X$) emissions by 90 percent or more, or limit the emissions of $NO_X$in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

### § 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce $NO_X$emissions by 90 percent or more, or limit the emissions of $NO_X$in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

### § 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

## Fuel Requirements for Owners and Operators

### § 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

## Other Requirements for Owners and Operators

### § 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

### § 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

## Compliance Requirements

### § 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified

in §60.4201(d) and §60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

### § 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and $NO_X$and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit $NO_X$and PM emissions;

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

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

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

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

## Testing Requirements for Owners and Operators

### § 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

### § 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

$C_i$= concentration of $NO_X$or PM at the control device inlet,

$C_o$= concentration of $NO_X$or PM at the control device outlet, and

R = percent reduction of $NO_X$or PM emissions.

(2) You must normalize the $NO_X$or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen ($O_2$) using Equation 3 of this section, or an equivalent percent carbon dioxide ($CO_2$) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\,O_2} \qquad \text{(Eq. 3)}$$

Where:

$C_{adj}$= Calculated $NO_X$or PM concentration adjusted to 15 percent $O_2$.

$C_d$= Measured concentration of $NO_X$or PM, uncorrected.

5.9 = 20.9 percent $O_2$−15 percent $O_2$, the defined $O_2$correction value, percent.

$\%O_2$= Measured $O_2$concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent $O_2$and $CO_2$concentration is measured in lieu of $O_2$concentration measurement, a $CO_2$correction factor is needed. Calculate the $CO_2$correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

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

$$F_o = \frac{0.209_{H_2}}{F_c} \qquad \text{(Eq. 4)}$$

Where:

$F_o$= Fuel factor based on the ratio of $O_2$volume to the ultimate $CO_2$volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is $O_2$, percent/100.

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

$F_c$= Ratio of the volume of $CO_2$produced to the gross calorific value of the fuel from Method 19, $dsm^3$ /J (dscf/$10^6$ Btu).

(ii) Calculate the $CO_2$correction factor for correcting measurement data to 15 percent $O_2$, as follows:

$$X_{CO_2} = \frac{5.9}{F_c} \qquad \text{(Eq. 5)}$$

Where:

$X_{CO2}$= $CO_2$correction factor, percent.

5.9 = 20.9 percent $O_2$−15 percent $O_2$, the defined $O_2$correction value, percent.

(iii) Calculate the $NO_X$and PM gas concentrations adjusted to 15 percent $O_2$using $CO_2$as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

$C_{adj}$= Calculated $NO_X$or PM concentration adjusted to 15 percent $O_2$.

$C_d$= Measured concentration of $NO_X$or PM, uncorrected.

$\%CO_2$= Measured $CO_2$concentration, dry basis, percent.

(e) To determine compliance with the $NO_X$mass per unit output emission limitation, convert the concentration of $NO_X$in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

$C_d$= Measured $NO_X$concentration in ppm.

$1.912 \times 10^{-3}$= Conversion constant for ppm $NO_X$to grams per standard cubic meter at 25 degrees Celsius.

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

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-}hour} \qquad (Eq. 8)$$

Where:

ER = Emission rate in grams per KW-hour.

$C_{adj}$= Calculated PM concentration in grams per standard cubic meter.

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

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

**Notification, Reports, and Records for Owners and Operators**

**§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?**

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

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

(ii) The address of the affected source;

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

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

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

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

## Special Requirements

### § 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in §60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

### § 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

### § 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

## General Provisions

### § 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

## § 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

*Combustion turbine* means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

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

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

*Diesel particulate filter* means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

*Emergency stationary internal combustion engine* means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

*Engine manufacturer* means the manufacturer of the engine. See the definition of “manufacturer” in this section.

*Fire pump engine* means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

*Manufacturer* has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

*Maximum engine power* means maximum engine power as defined in 40 CFR 1039.801.

*Model year* means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

*Other internal combustion engine* means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

*Reciprocating internal combustion engine* means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

*Rotary internal combustion engine* means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

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

*Stationary internal combustion engine* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

*Subpart* means 40 CFR part 60, subpart IIII.

*Useful life* means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

**Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder**

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

| Maximum engine power | Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr) | | | | |
|---|---|---|---|---|---|
| | NMHC + $NO_X$ | HC | $NO_X$ | CO | PM |
| KW<8 (HP<11) | 10.5 (7.8) | | | 8.0 (6.0) | 1.0 (0.75) |
| 8≤KW<19 (11≤HP<25) | 9.5 (7.1) | | | 6.6 (4.9) | 0.80 (0.60) |
| 19≤KW<37 (25≤HP<50) | 9.5 (7.1) | | | 5.5 (4.1) | 0.80 (0.60) |
| 37≤KW<56 (50≤HP<75) | | | 9.2 (6.9) | | |
| 56≤KW<75 (75≤HP<100) | | | 9.2 (6.9) | | |

| | | | | | |
|---|---|---|---|---|---|
| 75≤KW<130 (100≤HP<175) | | | 9.2 (6.9) | | |
| 130≤KW<225 (175≤HP<300) | | 1.3 (1.0) | 9.2 (6.9) | 11.4 (8.5) | 0.54 (0.40) |
| 225≤KW<450 (300≤HP<600) | | 1.3 (1.0) | 9.2 (6.9) | 11.4 (8.5) | 0.54 (0.40) |
| 450≤KW≤560 (600≤HP≤750) | | 1.3 (1.0) | 9.2 (6.9) | 11.4 (8.5) | 0.54 (0.40) |
| KW>560 (HP>750) | | 1.3 (1.0) | 9.2 (6.9) | 11.4 (8.5) | 0.54 (0.40) |

**Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder**

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

| Engine power | Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr) | | | |
|---|---|---|---|---|
| | Model year(s) | $NO_X$+ NMHC | CO | PM |
| KW<8 (HP<11) | 2008+ | 7.5 (5.6) | 8.0 (6.0) | 0.40 (0.30) |
| 8≤KW<19 (11≤HP<25) | 2008+ | 7.5 (5.6) | 6.6 (4.9) | 0.40 (0.30) |
| 19≤KW<37 (25≤HP<50) | 2008+ | 7.5 (5.6) | 5.5 (4.1) | 0.30 (0.22) |

**Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines**

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

| Engine power | Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d) |
|---|---|
| KW<75 (HP<100) | 2011 |
| 75≤KW<130 (100≤HP<175) | 2010 |
| 130≤KW≤560 (175≤HP≤750) | 2009 |

| | |
|---|---|
| KW>560 (HP>750) | 2008 |

**Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines**

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

| Maximum engine power | Model year(s) | NMHC + $NO_X$ | CO | PM |
|---|---|---|---|---|
| KW<8 (HP<11) | 2010 and earlier | 10.5 (7.8) | 8.0 (6.0) | 1.0 (0.75) |
| | 2011+ | 7.5 (5.6) | | 0.40 (0.30) |
| 8≤KW<19 (11≤HP<25) | 2010 and earlier | 9.5 (7.1) | 6.6 (4.9) | 0.80 (0.60) |
| | 2011+ | 7.5 (5.6) | | 0.40 (0.30) |
| 19≤KW<37 (25≤HP<50) | 2010 and earlier | 9.5 (7.1) | 5.5 (4.1) | 0.80 (0.60) |
| | 2011+ | 7.5 (5.6) | | 0.30 (0.22) |
| 37≤KW<56 (50≤HP<75) | 2010 and earlier | 10.5 (7.8) | 5.0 (3.7) | 0.80 (0.60) |
| | 2011+[1] | 4.7 (3.5) | | 0.40 (0.30) |
| 56≤KW<75 (75≤HP<100) | 2010 and earlier | 10.5 (7.8) | 5.0 (3.7) | 0.80 (0.60) |
| | 2011+[1] | 4.7 (3.5) | | 0.40 (0.30) |
| 75≤KW<130 (100≤HP<175) | 2009 and earlier | 10.5 (7.8) | 5.0 (3.7) | 0.80 (0.60) |
| | 2010+[2] | 4.0 (3.0) | | 0.30 (0.22) |
| 130≤KW<225 (175≤HP<300) | 2008 and earlier | 10.5 (7.8) | 3.5 (2.6) | 0.54 (0.40) |
| | 2009+[3] | 4.0 (3.0) | | 0.20 (0.15) |
| 225≤KW<450 (300≤HP<600) | 2008 and earlier | 10.5 (7.8) | 3.5 (2.6) | 0.54 (0.40) |
| | 2009+[3] | 4.0 (3.0) | | 0.20 (0.15) |
| 450≤KW≤560 (600≤HP≤750) | 2008 and earlier | 10.5 (7.8) | 3.5 (2.6) | 0.54 (0.40) |
| | 2009+ | 4.0 (3.0) | | 0.20 (0.15) |
| KW>560 (HP>750) | 2007 and earlier | 10.5 (7.8) | 3.5 (2.6) | 0.54 (0.40) |
| | 2008+ | 6.4 (4.8) | | 0.20 (0.15) |

[1]For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2]For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

**Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines**

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

| Engine power | Starting model year |
|---|---|
| 19≤KW<56 (25≤HP<75) | 2013 |
| 56≤KW<130 (75≤HP<175) | 2012 |
| KW≥130 (HP≥175) | 2011 |

**Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines**

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

| Mode No. | Engine speed[1] | Torque (percent)[2] | Weighting factors |
|---|---|---|---|
| 1 | Rated | 100 | 0.30 |
| 2 | Rated | 75 | 0.50 |
| 3 | Rated | 50 | 0.20 |

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

**Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder**

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

| For each | Complying with the requirement to | You must | Using | According to the following requirements |
|---|---|---|---|---|
| 1. Stationary CI | a. Reduce | i. Select the | (1) Method 1 or | (a) Sampling sites |

| | | | | |
|---|---|---|---|---|
| internal combustion engine with a displacement of ≥30 liters per cylinder | $NO_X$emissions by 90 percent or more | sampling port location and the number of traverse points; | 1A of 40 CFR part 60, appendix A | must be located at the inlet and outlet of the control device. |
| | | ii. Measure $O_2$at the inlet and outlet of the control device; | (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A | (b) Measurements to determine $O_2$concentration must be made at the same time as the measurements for $NO_X$concentration. |
| | | iii. If necessary, measure moisture content at the inlet and outlet of the control device; and, | (3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17) | (c) Measurements to determine moisture content must be made at the same time as the measurements for $NO_X$concentration. |
| | | iv. Measure $NO_X$at the inlet and outlet of the control device | (4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17) | (d) $NO_X$concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| | b. Limit the concentration of $NO_X$in the stationary CI internal combustion engine exhaust. | i. Select the sampling port location and the number of traverse points; | (1) Method 1 or 1A of 40 CFR part 60, appendix A | (a) If using a control device, the sampling site must be located at the outlet of the control device. |
| | | ii. Determine the $O_2$concentration of the stationary | (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix | (b) Measurements to determine $O_2$concentration must |

| | | | | |
|---|---|---|---|---|
| | | internal combustion engine exhaust at the sampling port location; and, | A | be made at the same time as the measurement for $NO_X$concentration. |
| | | iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and, | (3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17) | (c) Measurements to determine moisture content must be made at the same time as the measurement for $NO_X$concentration. |
| | | iv. Measure $NO_X$at the exhaust of the stationary internal combustion engine | (4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17) | (d) $NO_X$concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| | c. Reduce PM emissions by 60 percent or more | i. Select the sampling port location and the number of traverse points; | (1) Method 1 or 1A of 40 CFR part 60, appendix A | (a) Sampling sites must be located at the inlet and outlet of the control device. |
| | | ii. Measure $O_2$at the inlet and outlet of the control device; | (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A | (b) Measurements to determine $O_2$concentration must be made at the same time as the measurements for PM concentration. |
| | | iii. If necessary, measure moisture content at the inlet and outlet of the control device; and | (3) Method 4 of 40 CFR part 60, appendix A | (c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration. |

| | | | | |
|---|---|---|---|---|
| | | iv. Measure PM at the inlet and outlet of the control device | (4) Method 5 of 40 CFR part 60, appendix A | (d) PM concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| | d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust | i. Select the sampling port location and the number of traverse points; | (1) Method 1 or 1A of 40 CFR part 60, appendix A | (a) If using a control device, the sampling site must be located at the outlet of the control device. |
| | | ii. Determine the $O_2$concentration of the stationary internal combustion engine exhaust at the sampling port location; and | (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A | (b) Measurements to determine $O_2$concentration must be made at the same time as the measurements for PM concentration. |
| | | iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and | (3) Method 4 of 40 CFR part 60, appendix A | (c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration. |
| | | iv. Measure PM at the exhaust of the stationary internal combustion engine | (4) Method 5 of 40 CFR part 60, appendix A | (d) PM concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |

**Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII**

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

| General Provisions | Subject of citation | Applies to | Explanation |
|---|---|---|---|

| citation | | subpart | |
|---|---|---|---|
| §60.1 | General applicability of the General Provisions | Yes | |
| §60.2 | Definitions | Yes | Additional terms defined in §60.4219. |
| §60.3 | Units and abbreviations | Yes | |
| §60.4 | Address | Yes | |
| §60.5 | Determination of construction or modification | Yes | |
| §60.6 | Review of plans | Yes | |
| §60.7 | Notification and Recordkeeping | Yes | Except that §60.7 only applies as specified in §60.4214(a). |
| §60.8 | Performance tests | Yes | Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified. |
| §60.9 | Availability of information | Yes | |
| §60.10 | State Authority | Yes | |
| §60.11 | Compliance with standards and maintenance requirements | No | Requirements are specified in subpart IIII. |
| §60.12 | Circumvention | Yes | |
| §60.13 | Monitoring requirements | Yes | Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder. |
| §60.14 | Modification | Yes | |
| §60.15 | Reconstruction | Yes | |
| §60.16 | Priority list | Yes | |
| §60.17 | Incorporations by reference | Yes | |
| §60.18 | General control device requirements | No | |
| §60.19 | General notification and | Yes | |

| | | | |
|---|---|---|---|
| | reporting requirements | | |

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: | Therma Tru Corporation |
| Source Location: | 601 RE Jones Road, Butler, IN 46721 |
| County: | DeKalb |
| SIC Code: | 3089 and 3442 |
| Permit Renewal No.: | T033-30711-00019 |
| Permit Reviewer: | Mehul Sura |

The Office of Air Quality (OAQ) has reviewed a Part 70 Operating Permit Renewal application from Therma Tru Corporation relating to the operation of a metal and fiberglass entry door manufacturing source. On July 15, 2011, Therma Tru Corporation submitted an application to the OAQ requesting to renew its operating permit. Therma Tru Corporation was issued its first Part 70 Operating Permit Renewal T 033-17546-00019 on April 19, 2007.

## Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) steel door assembly line, identified as A-Line, consisting of the following operations, approved for construction in 2009:

(1) One (1) enclosed spray coating operation, identified as SP-2, using airless spray application method, with a maximum capacity of 360 steel doors per hour with 0.14 gallons per steel door coating usage rate, using dry filters for particulate control, and exhausting to stack SP-2.1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(2) One (1) adhesive coating operation, identified as SA-2, with a maximum capacity of 360 steel doors per hour with 0.20 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SA-2.1.Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility.

(3) One (1) spray coating curing oven, identified as SCO-2, with a maximum heat input capacity of 2.0 MMBtu/hr, using only natural gas and electric power, with no add-on control, and exhausting to a stack.

(4) One (1) foaming operation, identified as SF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SF-2.1.

(5) One (1) boring operation, identified as SDMC-2A, with maximum throughput capacity of 16,200 pounds per hour, using a cyclone for particulate control, and exhausting to stack SDMC-2.1.

(6) One (1) end rail boring operation, identified as SDMC-2B, with maximum throughput capacity of 16,200 pounds per hour, using a cyclone for particulate control, and exhausting to stack SDMC-2.1.

(7) One (1) machining station, identified as EU4, installed in 1989, using a cyclone for particulate emission control and exhausting to Stack SDMC-2.1, capacity: 360 doors per hour and 16,200 pounds per hour, consisting of the following:

(A) One (1) deflashing station, identified as DF-3, approved for construction in 2010, with a maximum throughput capacity of 13,680 pounds per hour, equipped with a cartridge dust collector for particulate control, exhausting to stack SDMC-2.1.

(b) One (1) Door Assembly Line, identified as B-Line, installed in 2000, capacity: 20,250 pounds of doors per hour or 360 doors per hour, consisting of:

(1) One (1) adhesive application station, identified as D2-APP1, without add-on control, exhausting through Stack 18.2, capacity: 43 pounds of adhesive per hour or 360 doors per hour. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(2) One (1) natural gas fired curing oven, identified as D2-OV2, exhausting through exhausting inside the building, maximum heat input capacity of 0.25 MMBtu/hr, and capacity: 360 doors per hour.

(3) One (1) door foam injection system, identified as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 360 doors per hour.

(4) One (1) door machining station, identified as D2-MS1, including an online boring center (D2-MS1-1), equipped with a baghouse and cyclone connected in series, identified as DC2, exhausting through Stack 20.1, capacity: 360 doors per hour or 18,000 pounds per hour.

(5) One (1) deflashing station, identified as DF-1, approved for installation in 2006, equipped with a cartridge dust collector for particulate control, exhausted inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(c) One (1) fiberglass door assembly line, identified as C-Line, consisting of the following operations, approved for construction in 2009:

(1) One (1) adhesive coating operation, identified as FA-2, with a maximum capacity of 360 steel doors per hour with 0.03 gallons per steel door coating usage rate, without add-on control, and exhausting to stack SVFA-2. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered plastic parts and products surface coating facility.

(2) One (1) foaming operation, identified as FF-2, with a maximum capacity of 360 steel doors per hour, with no add-on control, and exhausting to stack SVFF-2.

(3) One (1) curing oven/flame treater, identified as FCO-2, with a maximum heat input capacity of 0.25 MMBtu/hr, using natural gas only, with no add-on control, and exhausting to a stack.

(4) One (1) machining operation, identified as FDMC-2A, with maximum throughput capacity of 18,200 pounds per hour, using a baghouse for particulate control, and exhausting to stack DC1-1.

(5) One (1) online boring center, identified as FDMC-2B, with maximum throughput capacity of 18,200 pounds per hour, using a baghouse for particulate control, and exhausting to stack DC1-1.

(6) One (1) deflashing station, identified as DF-2, installed in 2009, equipped with a cartridge dust collector for particulate control, exhausting inside the building, capacity: 720 fiberglass door skins per hour or 13,680 pounds per hour.

(d) One (1) conveyorized coating line, identified as BPO2, consisting of the following operations, approved in 2011 for construction:

(1) Six (6) coating booths, identified as booths 1 through 6, using airless spray application method, with a maximum capacity of 60 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-1 through SBPO2-6.

(2) Three (3) manual booths, identified as booths 7 through 9, using airless spray application method, with a maximum capacity of 14 doors per hour, using dry filters for particulate control, and exhausting to stacks SBPO2-7 through SBPO2-9.

(e) Machining centers connected to dust collector DC3 and exhausting to stack DC3-1, as follows:

(1) Two (2) CNC Thermwood machining centers for Patio Doors, identified as PA-1, installed in 2006, capacity: 11.25 patio door units per hour, each.

(2) Three (3) KVAL cutout machines, identified as CO-1, CO-2 and CO-3, installed in 1993, 2005 and 2000, respectively, capacity: 50 units per hour, each.

(3) One (1) Door Hinger, identified as DH-1, installed prior to 1991, capacity: 15.63 doors per hour.

(f) One (1) double cut saw, identified as DCS-1, installed in 2004, using a baghouse for particulate control, exhausting to a stack DCS-2.1, capacity: 130 door skins per hour.

(g) One (1) spray booth coating operation, approved for construction in 2007 and modified in 2010, identified as TLI Coating Line, and consisting of:

(1) One (1) automatic line with five (5) paint booths, two (2) electric powered infrared drying banks, and five (5) electric flash stations, individually identified as Booth 1 through Booth 5, IR Drying Banks 1 and 2, and Flash 1 through Flash 5, collectively identified as TLI Automatic Line, with a maximum capacity of 60 doors per hour or 50 patio units per hour, using dry filters as control, and exhausting to stacks TLI-1 through TLI-5, respectively. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered a miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(2) Two (2) manual paint booths, identified as TLI Manual Booths (booths 6 and 7), with a combined maximum capacity of 14 units per hour, and using dry filters as control and exhausting to stacks TLI-6 and TLI-7. Under 40 CFR 63 (NESHAP), Subpart MMMM, these units are considered miscellaneous metal parts and products surface coating facilities. Under 40 CFR 63 (NESHAP), Subpart PPPP, these units are considered plastic parts and products surface coating facilities.

(3) One (1) paint kitchen for mixing, handling, and storing paint. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(4) One (1) spray booth, identified as TLI booth 8, approved for construction in 2010, with a maximum capacity of seven (7) units per hour, and using dry filters for particulate control and exhausting to stack TLI-8. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(5) One (1) cutout machine, identified as TLI cutout, modified in 2010, with a maximum throughput capacity of 1,375 pounds per hour, using cyclone TLI DC-1 for particulate control.

(h) One (1) concrete door adhesive spraying operation, approved for construction in 2007, identified as CD-3, with a maximum capacity of 24 doors per hour, using dry filters as control, and exhausting to Stack CD3-1. Under 40 CFR 63 (NESHAP), Subpart MMMM, this unit is considered a miscellaneous metal parts and products surface coating facility. Under 40 CFR 63 (NESHAP), Subpart PPPP, this unit is considered a plastic parts and products surface coating facility.

(i) One (1) Sheet Molding Compound (SMC) Production Line, identified as SMC2, installed in 2000, capacity: 18,500 pounds of molding compound per hour, consisting of:

(1) Two (2) calcium carbonate silos, identified as SILO1 and SILO2, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 8,800 pounds of calcium carbonate per hour, each, capacity: 200,000 pounds of calcium carbonate, each.

(2) Two (2) resin mixers, exhausting through Stack 17.1 and/or Stack 17.2, total throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(3) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(j) Six (6) sheet molding compound (SMC) presses, identified as Presses 1 through 6, installed in 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(k) One (1) sheet molding compound (SMC) press, identified as Press 7, installed in February 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(l) One (1) sheet molding compound (SMC) press, identified as Press 8, installed in August 1989, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63

(NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(m) One (1) sheet molding compound (SMC) press, identified as Press 9, installed in March 1999, exhausting inside, capacity: 862.5 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(n) Four (4) sheet molding compound (SMC) presses, identified as Presses 11 through 14, installed in 2000, exhausting inside, capacity: 1,067 pounds of SMC per hour, each. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(o) One (1) sheet molding compound (SMC) press, identified as Press 15, installed in March 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(p) One (1) sheet molding compound (SMC) press, identified as Press 16, installed in May 2001, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(q) One (1) sheet molding compound (SMC) press, identified as Press 17, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(r) One (1) sheet molding compound (SMC) press, identified as Press 18, installed in June 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(s) One (1) sheet molding compound (SMC) press, identified as Press 19, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(t) One (1) sheet molding compound (SMC) press, identified as Press 20, installed in July 2002, exhausting inside, capacity: 1,067 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, this unit is considered a sheet molding compound (SMC) manufacturing operation.

(u) Five (5) sheet molding compound (SMC) presses, identified as Presses 21 through 25, installed in 2005, exhausting inside, capacity: 1,067 pounds of SMC per hour each and a combined total of 4,826 pounds of SMC per hour. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered sheet molding compound (SMC) manufacturing operations.

(v) One (1) cutout machine, identified as CO-4, approved for construction in 2009, with a maximum throughput capacity of 2,450 pounds per hour, using a baghouse for particulate control, and exhausting to stack SDMC-2.1.

(w) One (1) double cut saw, identified as DCS-2, approved for construction in 2009, with a maximum throughput capacity of 2,470 pounds per hour, using a baghouse for particulate control, and exhausting to stack DCS-2.1.

(x) One (1) dry additive mixer, identified as SMCDM-1, approved for construction in 2009, with a maximum throughput capacity of 33 pounds per hour, using a baghouse for particulate control, and exhausting to stack SMCDM-1.1.

(y) One (1) miscellaneous sawing/trimming operation, identified as MS-2, approved for construction in 2009, with a maximum throughput capacity of 2,470 pounds per hour, using a baghouse for particulate control, and exhausting to stack DCS-2.1.

(z) One (1) cold cleaning/degreasing operation, identified as CC-2, approved for construction in 2009, with a maximum solvent usage capacity of 1 gallon per day, and venting inside the building.

**Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit**

There are no unpermitted emission units operating at this source during this review process.

**Emission Units and Pollution Control Equipment Removed From the Source**

The following emission unit has been removed from the source since the issuance of the Part 70 Operating Permit Renewal No. T039-20391-00174 on September 18, 2007:

One (1) auxiliary stand-alone machining center, identified as MJ-1, approved for construction in 2010, using baghouse DC1 for particulate control and exhausting to stack DC1-1.

**Insignificant Activities**

The source also consists of the following insignificant activities:

(a) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(b) Grinding and machining operations controlled with sock filter, fabric filters, and a cyclone (TLI DC-1) with a design grain loading of less than or equal to 0.03 grains per actual cubic feet and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking. [326 IAC 6-3-2]

(c) Four (4) five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(d) Three (3) five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(e) Six (6) above ground resin storage tanks, identified as Tanks 1 through 6, exhausting through stack 17.1 and/or stack 17.2 capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than three (3) pounds per hour and fifteen (15) pounds per day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(f) Five (5) resin holding tanks consisting of two (2) tanks, identified as A Side-Tank 1 and A Side-Tank 2 capacity: 1,500 gallons of resin each, and three (3) tanks, identified B Side-1 through B Side-3, capacity: 80 gallons of resin, each. Under 40 CFR 63 (NESHAP),

Subpart WWWW, these units are considered HAP-containing materials storage. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(g) One (1) 6,300-gallon tank storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day. Under 40 CFR 63 (NESHAP), Subpart WWWW, these units are considered HAP-containing materials storage.

(h) Activities with particulate emissions less than 5 lbs/hour or 25 lbs/day:

(1) Three (3) fiberglass skin cut down saws (FS-1, FS-2 and FS-3) [326 IAC 6-3-2].

(2) One (1) sanding booth (FS-4) [326 IAC 6-3-2].

(i) One (1) twelve thousand (12,000) -gallon aboveground storage tank, identified as T001, storing cyclopentane, covered by a nitrogen cap and pressurized to approximately thirty-five (35) psi. Under 40 CFR 68, Chemical Accident Prevention Provisions, this tank is used for storage of a flammable substance over 10,000 lbs, and requires a Risk Management Plan (RMP).

(j) One (1) diesel fuel-fired reciprocating emergency generator, identified as EG-1 rated at fifty (50) kW (~67 HP), (ordered in October 2010), and approved in 2010 for construction. The diesel generator, identified as EG-1, is considered an affected facility under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and a new stationary reciprocating internal combustion engine at an area source of hazardous air pollutants under NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CRF 63, Subpart ZZZZ).

(k) One (1) diesel fuel-fired compression ignition emergency generator for fire suppression system, identified as EG-2 rated at fifty (350) kilowatt (kW) (~469.2 HP), in stalled in 2005. EG-2, is considered an existing affected facility under the NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and an existing stationary reciprocating internal combustion engine at an area source of hazardous air pollutants under NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CRF 63, Subpart ZZZZ).

## Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal No. T033-17546-00019 on April 19, 2007, the source has constructed or has been operating under the following additional approvals:

(a) Significant Source Modification No. 033-25066-00019, issued on December 14, 2007

(b) Significant Permit Modification No. 033-25101-00019, issued on December 31, 2007

(c) Administrative Amendment No. 033-26950-00019, issued on September 23, 2008

(d) Significant Source Modification No. 033-27380-00019, issued on June 10, 2009

(e) Significant Permit Modification No. 033-27391-00019, issued on June 29, 2009

(f) Administrative Amendment No. 033-28657-00019, issued on December 14, 2009

(g) Significant Source Modification No. 033-29086-00019, issued on August 19, 2010

(h) Significant Permit Modification No. 033-29202-00019, issued on September 8, 2010

(i) Significant Source Modification No. 033-29086-00019, issued on January 11, 2011

(j) Significant Permit Modification No. 033-29202-00019, issued on January 28, 2011

(k) Significant Source Modification No. 033-30467-00019, issued on August 8, 2011

(l) Significant Permit Modification No. 033-30496-00019, issued on August 19, 2011

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 DeKalb County.

| Pollutant | Designation |
|---|---|
| $SO_2$ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1] |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Cannot be classified or better than national standards. |
| Pb | Not designated. |

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

Unclassifiable or attainment effective April 5, 2005, for $PM_{2.5}$.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
DeKalb 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
DeKalb County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

## Fugitive Emissions

Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2 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 applicability.

## Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

| Unrestricted Potential Emissions | |
|---|---|
| Pollutant | Tons/year |
| PM | Greater than 100, less than 250 |
| $PM_{10}$ | Greater than 100, less than 250 |
| $PM_{2.5}$ | Greater than 100, less than 250 |
| $SO_2$ | Less than 100 |
| VOC | Greater than 100, less than 250 |
| CO | Less than 100 |
| $NO_x$ | Less than 100 |
| Single HAP | Greater than 10 |
| Total HAP | Greater than 25 |

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM10 and VOC, each, is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

## Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

**Potential to Emit After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any 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 | Operation | Emission Unit ID | PM | PM10/PM2.5 | VOC | $SO_2$ | CO | $NO_x$ | CO2 equivalent (CO2e) |
|---|---|---|---|---|---|---|---|---|---|
| C-Line | coating | FA-2* | - | - | 0.15 | - | - | - | - |
| A-Line | | SA-2* | - | - | 1.02 | - | - | - | - |
| B-Line | | D2-APP1* | - | - | 22.79 | - | - | - | - |
| A-Line | | SP-2 | total less than 78 | total less than 78 | 122.45 | - | - | - | - |
| BPO2 Line (Auto) | | BPO2 Line (Auto) | | | 106 | - | - | - | - |
| CD-3 | | CD-3 | | | - | - | - | - | - |
| TLI Coating Line and CD-3 | | Booth 1 -8 and CD-3 | | | 39.9 | - | - | - | - |
| Cold Cleaner | Cold Cleaner | CC-2 | - | - | 1.28 | - | - | - | - |
| C-Line | curing | FCO-2 | 0.02 | 0.02 | 0.01 | 0.01 | - | 0.99 | 131 |
| A-Line | Deflashing Station | **DF-3** | 3.03 | 3.03 | - | - | - | - | - |
| B-Line | | DF-1 | 0.834 | 0.834 | - | - | - | - | - |
| C-Line | | DF-2 | 0.83 | 0.83 | - | - | - | - | - |
| Dry Additive Mixer | Dry Additive Mixer | SMCDM-1 | 0.04 | 0.04 | - | - | - | - | - |
| B-Line | foam injection | D2-F1 | - | - | 23.65 | - | - | - | - |
| A-Line | Foaming | SF-2 | - | - | 23.54 | - | - | - | - |
| C-Line | Foaming | FF-2 | - | - | 23.54 | - | - | - | - |
| engine | Insignificant Activities | EG-1 | 0.25764 | 0.25764 | 0.25764 | 0.23997 | 0.78261 | 3.63147 | 339 |
| engine | | EG-2 | 0.65 | 0.65 | 0.74 | 0.6 | 1.96 | 9.1 | 23,732 |
| Grinding and Machining | | TLI DC-1 | 4.5 | 4.5 | - | - | - | - | - |
| Machining | | FS-1 | 0.114 | 0.114 | - | - | - | - | - |
| Machining | | FS-2 | 0.253 | 0.253 | - | - | - | - | - |
| Machining | | FS-3 | 0.253 | 0.253 | - | - | - | - | - |

| Process | Operation | Emission Unit ID | PM | PM10/PM2.5 | VOC | $SO_2$ | CO | $NO_x$ | CO2 equivalent (CO2e) |
|---|---|---|---|---|---|---|---|---|---|
| Machining | | FS-4 | 0.253 | 0.253 | - | - | - | - | - |
| A-Line | Machining | EU4 | 70.86 | 70.86 | - | - | - | - | - |
| A-Line | | SDMC-2A | 2.21 | 2.21 | - | - | - | - | - |
| A-Line | | SDMC-2B | 8.83 | 8.83 | - | - | - | - | - |
| C-Line | | FDMC-2A | 11.13 | 11.13 | - | - | - | - | - |
| C-Line | | FDMC-2B | 7.88 | 7.88 | - | - | - | - | - |
| Machining | | CO-4 | 2.15 | 2.15 | - | - | - | - | - |
| Machining | | DCS-2 | 1.41 | 1.41 | - | - | - | - | - |
| Machining | | MS-2 | 2.14 | 2.14 | - | - | - | - | - |
| Machining | | CO-1, CO-2 and CO-3 | 6.44 | 6.44 | - | - | - | - | - |
| Machining | | DCS-1 | 2.81 | 2.81 | - | - | - | - | - |
| Machining | | DH-1 | 0.219 | 0.219 | - | - | - | - | - |
| Machining | | PA-1 | 0.296 | 0.296 | - | - | - | - | - |
| B-Line | | D2-MS1 | 11.13 | 11.13 | - | - | - | - | - |
| B-Line | | D2-MS1-1 | 7.88 | 7.88 | - | - | - | - | - |
| TLI Coating Line | mixing | | - | - | - | - | - | - | - |
| A-Line | Oven | SCO-2 | 0.02 | 0.02 | 0.01 | 0.01 | - | 0.99 | 1051 |
| B-Line | | D2-OV2 | | 0 | | - | - | - | - |
| SMC Presses | Press | SMC Press 9 | - | - | 13.6 | - | - | - | - |
| SMC Presses | Press | 1 through 8 | - | - | 122 | - | - | - | - |
| | | 11 through 14 | - | - | 61.6 | - | - | - | - |
| | | 15 and 16 | - | - | 30.6 | - | - | - | - |
| | | 17 through 20 | - | - | 39.9 | - | - | - | - |
| | | 21 through 25 | - | - | 37.68 | - | - | - | - |
| Sheet Molding Compound (SMC) Production Line | Resin Mixers | Resin Mixers | - | - | 7.7 | - | - | - | - |
| | silo | SILO1 | 0.751 | 0.751 | - | - | - | - | - |
| | silo | SILO2 | 0.751 | 0.751 | - | - | - | - | - |
| | SMC Extruder | SMC Extruder | - | - | 12.2 | - | - | - | - |
| TLI Coating Line | TLI Miscellaneous Sawing/Trimming | TLI Misc. | 6.9 | 6.9 | - | - | - | - | - |
| TLI Coating Line | TLT Cutout Machine | TLT Cutout | 15.02 | 15.02 | - | - | - | - | - |
| Natural Gas Combustion | Natural Gas Combustion | | | | | | | | 43,883 |

| Process | Operation | Emission Unit ID | PM | PM10/PM2.5 | VOC | $SO_2$ | CO | $NO_x$ | CO2 equivalent (CO2e) |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | | | **247.9*** | **247.9*** | **less than 250**** | **0.86** | **2.74** | **14.71** | **47,783** |
| **PSD Major Source Threshold** | | | **250** | **250** | **250** | **250** | **250** | **250** | |

* The source has made process changes at FA-2, SA-2 and D2-APP1 related to a change in the method of adhesive application. The source has submitted updated information on the adhesive application method used at FA-2, SA-2 and D2-APP1. Based on this updated information, the source has requested that the particulate emissions from FA-2, SA-2 and D2-APP1 be reevaluated because there are no overspray and particulate emissions from the FA-2, SA-2 and D2-APP1 using the new adhesive application method. The source has provided vendor information related to the new adhesive application method used at FA-2, SA-2 and D2-APP1 in support of this claim. IDEM has reviewed this information and has determined that there are no overspray and particulate emissions from the new adhesive application method used at FA-2, SA-2 and D2-APP1. The particulate emission limits for FA-2, SA-2 and D2-APP1 in the permit and the associated compliance determination, record keeping, and reporting conditions related to these emission limits will be removed through this renewal.

** PTE based on the PSD Minor limits taken by the source (for details of this PSD Minor limits, please refer 326 IAC 2-2 (PSD) rule applicability under 'State Rule Applicability Determination' section of this TSD).

This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHG, are less than two hundred fifty (<250) tons per year, emissions of GHG are less than one hundred thousand (<100,000) tons of CO2 equivalent (CO2e) emissions per year, and it is not in one of the twenty-eight (28) listed source categories.

## Federal Rule Applicability

**Compliance Assurance Monitoring (CAM)**
Pursuant to 40 CFR 64.2, 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 new or modified emission unit involved:

CAM Analysis - PM10/PM2.5

| 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) |
|---|---|---|---|---|---|---|---|
| FDMC-2A | Y | Y | 1113.22 | 11.13 | 100.00 | Y | N |
| D2-MS1 | Y | Y | 1113.22 | 11.13 | 100.00 | Y | N |
| FDMC-2B | Y | Y | 788.40 | 7.88 | 100.00 | Y | N |
| D2-MS1-1 | Y | Y | 788.40 | 7.88 | 100.00 | Y | N |
| SP-2 | Y | Y | 508.16 | 25.41 | 100.00 | Y | N |
| EU4 | Y | Y | 506.15 | 70.86 | 100.00 | Y | N |
| BPO2 Coating Line | Y | Y | 364.02 | 4.25 | 100.00 | Y | N |
| Booth 1 -8 and CD-3 | Y | Y | 344.69 | 19.53 | 100.00 | Y | N |
| CO-4 | Y | Y | 214.62 | 2.15 | 100.00 | Y | N |
| CO-1 | Y | Y | 214.62 | 2.15 | 100.00 | Y | N |
| CO-2 | Y | Y | 214.62 | 2.15 | 100.00 | Y | N |
| CO-3 | Y | Y | 214.62 | 2.15 | 100.00 | Y | N |
| MS-2 | Y | Y | 213.53 | 2.14 | 100.00 | Y | N |
| DCS-2 | Y | Y | 140.64 | 1.41 | 100.00 | Y | N |
| DCS-1 | N | Y | 140.64 | 2.81 | 100.00 | Y | N |
| TLT Cutout | Y | Y | 107.31 | 15.02 | 100.00 | Y | N |
| CD-3 | Y | Y | 86.83 | 2.73 | 100.00 | N | N |
| DF-3 | Y | Y | 83.43 | 0.83 | 100.00 | N | N |
| DF-1 | Y | Y | 83.43 | 0.83 | 100.00 | N | N |
| DF-2 | Y | Y | 83.43 | 0.83 | 100.00 | N | N |
| SILO1 | Y | Y | 75.09 | 0.75 | 100.00 | N | N |
| SILO2 | Y | Y | 75.09 | 0.75 | 100.00 | N | N |
| SDMC-2B | Y | Y | 63.07 | 8.83 | 100.00 | N | N |
| TLI Misc. | Y | Y | 49.28 | 6.90 | 100.00 | N | N |
| DH-1 | Y | Y | 21.90 | 0.22 | 100.00 | N | N |
| SDMC-2A | Y | Y | 15.77 | 2.21 | 100.00 | N | N |
| PA-1 | Y | Y | 14.78 | 0.15 | 100.00 | N | N |
| PA-1 | Y | Y | 14.78 | 0.15 | 100.00 | N | N |
| FS-2 | Y | Y | 12.67 | 0.25 | 100.00 | N | N |
| FS-3 | Y | Y | 12.67 | 0.25 | 100.00 | N | N |
| FS-4 | Y | Y | 12.67 | 0.25 | 100.00 | N | N |
| FS-1 | Y | Y | 5.70 | 0.11 | 100.00 | N | N |
| CD-1 | Y | Y | 1.10 | 0.01 | 100.00 | N | N |
| EG-2 | N | N | 0.09 | 0.09 | 100.00 | N | N |
| FCO-2 and SCO-2 | N | N | 0.07 | 0.07 | 100.00 | N | N |
| EG-1 | N | N | 0.01 | 0.01 | 100.00 | N | N |

The CAM requirements for the CAM applicable emission units listed above have been specified under 'Compliance Determination and Monitoring Requirements' section of this TSD.

CAM Analysis - VOC

None of the emission units at this source is equipped with VOC control equipment. Therefore, CAM for VOC does not apply to any emission unit at this source.

**National Emission Standards for Hazardous Air Pollutants (NESHAP)**

(a) Surface Coating of Miscellaneous Metal Parts and Products (40 CFR 63, Subpart MMMM)

The requirements of this NESHAP (which is incorporated by reference as 326 IAC 20-80) are included for this source because miscellaneous metal parts and products coating is performed at this source, and this source is considered as an existing major source under NESHAP. The specific facilities include BPO2 Coating Line, CD-3, SP-2, SA-2 and TLI Surface Coating Operations.

Nonapplicable portions of the NESHAP will not be included in the permit. The Permittee has chosen to comply with the requirements by using the emission rate without add-on control devices. The coating operations are subject to the following portions of Subpart MMMM:

(1) 40 CFR 63.3880
(2) 40 CFR 63.3881 (a)(1), (a)(2), (b), (d), and (e)
(3) 40 CFR 63.3882
(4) 40 CFR 63.3883 (b), and (d)
(5) 40 CFR 63.3890 (b)(1)
(6) 40 CFR 63.3891 (b)
(7) 40 CFR 63.3892 (a)
(8) 40 CFR 63.3893 (a)
(9) 40 CFR 63.3900 (a)(1), (b)
(10) 40 CFR 63.3901
(11) 40 CFR 63.3910 all except (c)(8)(i)(iii) and (c)(9)
(12) 40 CFR 63.3920 (a)(1), (a)(2), (a)(3), (a)(4), and (a)(6)
(13) 40 CFR 63.3930 all except (c)(2)(4) and (k)
(14) 40 CFR 63.3931
(15) 40 CFR 63.3950
(16) 40 CFR 63.3951
(17) 40 CFR 63.3952
(18) 40 CFR 63.3980
(19) 40 CFR 63.3981
(21) Table 2
(22) Table 3
(23) Table 4

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to this NESHAP subject facilities except when otherwise specified in 40 CFR 63, Subpart MMMM.

(b) Surface Coating of Plastic Parts and Products (40 CFR 63, Subpart PPPP)

The requirements of this NESHAP (which is incorporated by reference as 326 IAC 20-81) are included for this source because plastic parts and products surface coating is performed at this source, and this source is considered as an existing major source under NESHAP. The specific facilities include TLI Surface Coating Operations, D2-APP1 and FA-2.

Nonapplicable portions of the NESHAP will not be included in the permit. The Permittee has chosen to comply with the requirements by using the emission rate without add-on control devices. The coating operations are subject to the following portions of Subpart MMMM:

(1) 40 CFR 63.4480
(2) 40 CFR 63.4481 (a)(1), (a)(2), (b), and (e)
(3) 40 CFR 63.4482
(4) 40 CFR 63.4483 (b) and (d)
(5) 40 CFR 63.4490 (b)(1)
(6) 40 CFR 63.4491 (b)
(7) 40 CFR 63.4492 (a)
(8) 40 CFR 63.4493 (a)
(9) 40 CFR 63.4500 (a)(2) and (b)
(10) 40 CFR 63.4501
(11) 40 CFR 63.4510 all except (c)(8)(i)(iii) and (c)(9)
(12) 40 CFR 63.4520 (a)(1), (a)(2), (a)(3), (a)(4), and (a)(6)
(13) 40 CFR 63.4530 all except (c)(2)(4) and (j)
(14) 40 CFR 63.4531
(15) 40 CFR 63.4550
(16) 40 CFR 63.4551
(17) 40 CFR 63.4552
(18) 40 CFR 63.4580
(19) 40 CFR 63.4581
(20) Table 2
(21) Table 3
(22) Table 4
(23) Appendix A

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to this NESHAP subject facilities except when otherwise specified in 40 CFR 63 Subpart PPPP.

(c) Reinforced Plastic Composites Production (40 CFR 63, Subpart WWWW)

The requirements of this NESHAP (which is incorporated by reference as 326 IAC 20-56) are included for this source because reinforced plastic composites production is performed at this source, and this source is considered as an existing major source under NESHAP.

Construction of this source commenced prior to August 2, 2001. Therefore, this is an existing affected source. The affected source consists of all parts of the facility engaged in the following operations: closed molding, sheet molding compound (SMC) manufacturing, mixing, cleaning of equipment used in reinforced plastic composites manufacture, HAP containing materials storage, and repair operations on parts this source also manufactures.

The specific facilities include SMC Presses 1 through 25, Resin Mixers, SMC Extruder and the following Insignificant Activities:

(c) Four (4) five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day.

(d) Three (3) five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day.

(e) Six (6) above ground resin storage tanks, identified as Tanks 1 through 6, exhausting through stack 17.1 and/or stack 17.2 capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than three (3) pounds per hour and fifteen (15) pounds per day.

(f) Five (5) resin holding tanks consisting of two (2) tanks, identified as A Side-Tank 1 and A Side-Tank 2 capacity: 1,500 gallons of resin each, and three (3) tanks, identified B Side-1 through B Side-3, capacity: 80 gallons of resin, each.

(g) One (1) 6,300-gallon tank storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day.

Nonapplicable portions of the NESHAP will not be included in the permit. The Permittee has chosen to comply with the requirements by using the emission rate without add-on control devices. The coating operations are subject to the following portions of Subpart WWWW:

(1) 63.5780
(2) 63.5785 (a)
(3) 63.5790 (a), (b) and (c)
(4) 63.5795 (a)(1) and (a)(2), (b)
(5) 63.5797 (a), (b) and (c)
(6) 63.5800
(7) 63.5805 (a), (b) and (g)
(8) 63.5835 (a) and (c)
(9) 63.5840
(10) 63.5860 (a)
(11) 63.5900 (a)(4), (b) and (c)
(12) 63.5905
(13) 63.5910 (a), (b), (c)(1) through (c)(5), (d), (g), (h) and (i)
(14) 63.5915 (a) and (d)
(15) 63.5920
(16) 63.5925
(17) 63.5930
(18) 63.5935

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to this NESHAP subject facilities except when otherwise specified in 40 CFR 63 Subpart WWWW.

(d) Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ)

(1) EG-1 is subject the requirements of this NESHAP (326 IAC 20-82) because it is considered a new (manufactured on or after June 12, 2006) stationary reciprocating internal combustion engine (RICE) at a major source of HAP and is an emergency stationary RICE with a site rating of less than or equal to 500 brake HP.

(2) EG-2 is subject the requirements of this NESHAP because it is considered an existing stationary RICE at a major source of HAP and is an emergency stationary RICE with a site rating of less than or equal to 500 brake HP.

EG-1 and EG-2 are subject to the following portions of the NESHAP for new emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(ii) and (c) (EG-1 only)
(4) 40 CFR 63.6590(a)(1)(ii) and (c) (EG-2 only)
(5) 40 CFR 63.6595(a)(5)

(6) 40 CFR 63.6665
(7) 40 CFR 63.6670
(8) 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, EG-1 and EG-2 do not have to meet the requirements of 40 CRF 63, Subpart A (General Provisions), since EG-1 and EG-2 are considered a new stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(d) There are no other NESHAPs (326 IAC 20 and 40 CFR Parts 61 and 63) included in the renewal for this source.

**New Source Performance Standards (NSPS)**

(a) Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)

(1) EG-1 is subject to the requirements of this NSPS because it was ordered by the source and constructed after July 11, 2005, and has a vendor manufacturing date after April 1, 2006.

(2) EG-2 is subject the requirements of this NSPS because it was ordered by the source and constructed after July 11, 2005.

EG-1 and EG-2 are subject to the following portions of Subpart IIII:

(1) 40 CFR 60.4200(a)(2),
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (e)
(8) 40 CFR 60.4214(b)
(9) 40 CFR 60.4218
(10) 40 CFR 60.4219

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to EG-1 and EG-2, except as otherwise specified in 40 CFR 60, Subpart IIII.

(b) Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (40 CFR 60, Subpart Kb)

All storage tanks at this source have a capacity less than 75 cubic meters. Therefore, the requirements of 40 CFR 60, Subpart Kb are not included in the permit.

(c) There are no other NSPS (326 IAC 12 and 40 CFR Part 60) included in this permit renewal.

## State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

**PM/PM10**

The source has opted to continue comply with the following existing limits in the permit:

(a) The PM/PM10 emissions from each facility listed in the table below shall not exceed its specified limit:

| Emission Unit | PM/PM10 limit (pounds per hour) |
|---|---|
| SDMC-2A | 1.80 |
| FDMC-2A | 2.54 |
| FDMC-2B | 1.80 |
| CO-4 | 0.49 |
| DCS-2 | 0.32 |
| MS-2 | 0.49 |
| SDMC-2B | 0.10 |
| SMCDM-1 | 0.01 |
| D2-MS1 | 2.54 |
| D2-MS1-1 | 1.8 |
| PA-1 | 0.067 |
| CO-1, CO-2 and CO-3 | 1.47 |
| DH-1 | 0.05 |
| EU4 | 16.17 |
| DCS-1 | 0.64 |
| TLI Misc. | 1.57 |
| TLI Cut Out | 3.43 |
| SILO1 | 0.17 |
| SILO2 | 0.17 |
| Grinding and machining operations | 1.80 |
| FS-1 | 0.026 |
| FS-2 | 0.057 |
| FS-3 | 0.057 |
| FS-4 | 0.057 |
| DF-1 | 0.19 |
| DF-2 | 0.19 |
| DF-3 | 0.7 |

(b) The total PM/PM10 emissions from the surface coating facilities listed in table below shall not exceed 78 tons per twelve consecutive month period.

| Process | Emission Unit ID |
|---|---|
| TLI Coating Line | Booth 1-8 |

| | |
|---|---|
| A-Line | SP-2 |
| BPO2 Line | Booths 1 through 9 |
| CD-3 | CD-3 |

Compliance with the limits in (a) and (b) above in conjunction with PM/PM10 PTE of D2-F1, SMC2, SCO-2, D2-OV2, FCO-2, EG-1 and EG-2 will limit source-wide non-fugitive PM/PM10 emissions to less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

The source has removed Machining operation MJ-1 which has controlled particulate PTE of 3 tons/year. This PTE is added to the coating operation particulate emission combined limit of 75 tons/year and as a result the coating operation particulate emission combined limit has been changed from 75 tons/year to 78 tons/year.

The particulate control equipment equipped on the emission units listed in (a) and (b) above shall be in operation at all times the associated emission units are in operation.

The Permittee shall determine the $PM/PM_{10}$ emissions associated with each coating applied at the emission units listed in (b) above using the following equation:

$$PM/PM10 = (\sum CU \times D \times W\%S) \times [1-(TE/100)] \times [1-(CE/100)] \times 1/2000$$

Where:

| | |
|---|---|
| PM/PM10 = | The total PM/PM10 emissions (ton/month) for all coatings. |
| CU = | The total Coating use (gal coating/month) of each coating. |
| D = | The density (lb coating/gal coating) of each coating. |
| W%S = | The weight percent solids (lb solids/lb coating) of each coating. |
| TE = | The transfer efficiency (%) of the spray applicators. This value shall be equal 75% for High Volume and Low Pressure (HVLP) spray application method and 50% for Airless spray application method; unless an IDEM approved test is conducted, in which case the value shall equal that determined from the most recent IDEM approved test. |
| CE = | The control efficiency (%) of the dry filters. This value shall be equal 95%. |

**VOC**

The source has opted to continue comply with the following existing limit in the permit:

The total sum of VOC usage (including coatings, dilution solvents, and cleaning solvents) at the coating facilities identified as D2-APP1, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2, and FA-2, the two (2) foaming operations (FF-2 and SF-2), and the one (1) foam injection system (D2-F1), and VOC emissions from the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25 and BPO2 Line shall not exceed 246 tons per twelve (12) consecutive months period with compliance determined at the end of each month.

Compliance with this emission limit in conjunction with the VOC PTE of SCO-2, D2-OV2, EG-1, EG-2, FCO-2, the sixty-four (64) insignificant combustion units, and the insignificant tanks emissions (including tank T001), will ensure that the source-wide non-fugitive VOC emissions from the entire source are less than 250 tons per year. Therefore, this is a minor source under 326 IAC 2-2.

The VOC content and usage 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 in order to comply with the VOC usage and content limitations specified below. 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 VOC emissions from the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25 shall be determined by the following equation:

VOC emissions from the Sheet Molding Compound Production Line (SMC2) consisting of two (2) resin mixers and one (1) SMC extruder and from the SMC Presses 1 through 25 (tons per twelve consecutive months) = ∑ SMC throughput at Presses 1 through 25 and SMC2 (mixers and extruder) (tons per twelve consecutive months) x [% VOC content of the SMC / 100] x [0.03 (fraction of VOC content of the SMC which is emitted)]

SSM No. 033-25066-00019

The total PM/PM10 from CD-3 and the TLI Coating Line shall not exceed fifteen (15) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to SSM No. 033-25066-00019.

The particulate control equipment equipped on CD-3 and the TLI Coating Line shall be in operation at all times the associated emission units are in operation.

The Permittee shall determine the $PM/PM_{10}$ emissions from CD-3 and the TLI Coating Line using the equation specified in PSD applicability under 'State Rule Applicability – Entire Source' section of this TSD.

MSM No. 033-23835-00019

Pursuant to 326 IAC 2-7-10.5(d)(4)(C), the PM/PM10 emissions from the deflashing station identified as DF-1 shall not exceed 0.19 pounds per hour.

Compliance with this limit ensures that the PM/PM10 emissions from DF-1 are less than twenty-five (25) tons per year and render the modification approved under MSM No. 033-23835-00019, issued on December 13, 2006, as minor source modification.

The particulate control equipment equipped on DF-1 shall be in operation at all times the DF-1 is in operation, in order to comply with the above limit.

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(b)(1), 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, 2014 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)

This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The source-wide fugitive particulate emissions are less than 25 tons per year; therefore, requirements of this rule do not apply to this source.

**State Rule Applicability – Individual Facilities**

326 IAC 8-2-9 Miscellaneous metal and plastic coating operations

D2-APP1, the TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), CD-3, SP-2, SA-2 and BPO2 Line are subject to the requirements of this rule because surface coating of metal parts or products (under the Standard Industrial Classification (SIC) Code of major group #34) are performed at these facilities.

(a) Pursuant to 326 IAC 8-2-9(a)(1), the Permittee shall not discharge into the atmosphere of any VOC in excess of the following:

Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit).

Based on the MSDS submitted by the source and calculations made, the above specified coating operations can comply with this requirement.

Note:

(a) The coating material, identified as Adhesion Promoter 50-C029-1715, has VOC content exceeding the above limit. The Permittee has informed IDEM that this coating material will not be used for coating metal substrate.

(b) The coating material, identified as Mineral Spirits, has VOC content exceeding the above limit. The Permittee has informed IDEM that this coating material will not be used for coating purpose.

(b) Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not be limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

326 IAC 8-1-6 (New facilities; general reduction requirements)

The TLI Coating Line has the ability to coat metal and plastic products. The TLI Coating Line is subject to 326 IAC 8-2-9 when coating metal. However, the TLI Coating Line is not subject to 326 IAC 8-2-9 when coating plastic substrate because this type of plastic coating operation is not specified under 326 IAC 8-2-9. The TLI Coating Line is not subject to any other rules under 326 IAC 8 (except 326 IAC 8-1-6 ) when coating plastic substrate this type of plastic coating operation is not specified elsewhere in 326 IAC 8.

The Permittee has opted to continue comply with below 326 IAC 8-1-6 BACT avoidance limit for TLI Coating Line when coating plastic parts. This limit was established under SSM No. 033-25066-00019 issued, on June 15, 1996.

The input of VOC including coatings, dilution solvents, and cleaning solvents to the TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), shall not exceed twenty-five (25) tons per twelve (12) consecutive month period when coating plastic products, with compliance determined at the end of each month.

Compliance with the above limit shall render 326 IAC 8-1-6 not applicable to SSM No. 033-25066-00019 with respect to VOC.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The coating operations, Resin Mixers and SMC Extruder are subject to NESHAP, Subpart MMMM, WWWW or PPPP. Therefore the requirements of 326 IAC 2-4.1 do not apply to the coating operations. Each remaining facility at this source has potential to emit less than 10 tons per year for a single HAP and less than 25 tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to the remaining facilities.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2(d), particulate from the, TLI Coating Line (including the TLI Automatic Line (booths 1-5), TLI Manual Booths (booths 6 & 7), and TLI booth 8), the one (1) concrete door adhesive spraying operation (CD-3), the spray booth coating operation (SP-2), and BPO2 Line shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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

| Emission Unit/Activity | Process Weight Rate (tons/hr) | Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr) |
|---|---|---|

| Emission Unit/Activity | Process Weight Rate (tons/hr) | Allowable Particulate Emission Rate (326 IAC 6-3-2) (lb/hr) |
|---|---|---|
| EU4 | 8.1 | 16.65 |
| D2-MS1 and D2-MS1-1 | 9.0 | 17.87 |
| PA-1 | 0.38 | 2.15 |
| CO-1, CO-2, and CO-3 | 1.225 | 4.70 |
| DH-1 | 0.352 | 2.03 |
| DCS-1 | 1.235 | 4.72 |
| SDMC-2A | 8.1 | 16.65 |
| SDMC-2B | 8.1 | 16.65 |
| FDMC-2A | 9.1 | 18 |
| FDMC-2B | 9.1 | 18 |
| CO-4 | 1.225 | 4.7 |
| DCS-2 | 1.235 | 4.72 |
| MS-2 | 1.235 | 4.72 |
| SILO1 | 4.4 | 11.06 |
| SILO2 | 4.4 | 11.06 |

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

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

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

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the insignificant grinding and machining operations, including FS-1, FS-2, FS-3 and FS-4 shall not exceed an amount determined by the following:

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

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

The particulate control equipment equipped on the emission units specified in (a), (b) and (c) above shall be in operation at all times the associated emission units are in operation, in order to comply with their respective limits.

326 IAC 8-3-2 (Cold Cleaner Operations) and 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control)

The following insignificant activities were constructed after 1980:

(a) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(d) One (1) cold cleaning/degreasing operation, identified as CC-2, approved for construction in 2009, with a maximum solvent usage capacity of 1 gallon per day, and venting inside the building.

Pursuant to 326 IAC 8-3-2, the Permittee shall comply with the following for the cold cleaning operations:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

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

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

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

Pursuant to 326 IAC 8-3-5(a), the Permittee shall comply with the following for cold cleaner degreaser operations without remote solvent reservoirs:

(a) the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
(A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
(B) the solvent is agitated; or
(C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.
(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
(1) Close the cover whenever articles are not being handled in the degreaser.
(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## 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 Permittee shall perform as specified below:

| Summary of Testing Requirements | | | | | | |
|---|---|---|---|---|---|---|
| **Emission Unit** | **Control Device** | **Timeframe for Testing** | **Pollutant/ Parameter** | **Frequency of Testing** | **PM/PM10 PSD limit (pounds per hour)** | **Results and test date** |
| FDMC-2A | Baghouse | *see the notes below the table | PM/PM10<br><br>(PM10 includes filterable PM) | once every five (5) years from the date of the valid compliance demonstration | 2.54 lb/hr | Results: 1.1 lb/hr test date: 10/21/2010 |
| FDMC-2B | Baghouse | | | | 1.8 lb/hr | Results: 1.1 lb/hr test date: 10/21/2010 |
| any one (1) of the booths in BPO2 Line | Dry Filter | no later than 180 days after the initial start-up of BPO2 Line | Transfer Efficiency of Airless Spray application method | | total PM/PM10 emissions from all the surface coating operations shall not exceed 78 tons per twelve consecutive | test to be performed |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | month period | |

* The Permittee shall perform PM and PM10 testing on whichever later date from the time period specified in (a) and (b) below.

(a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8, 2008.

(b) Within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup.

The particulate testing for the TLI Coating Line has been removed due to the following reason:

The intent of this testing requirement is to determine the compliance with the particulate limit specified under SSM No. 033-25066-00019. The solid usage, transfer efficiency and filter efficiency values are sufficient to determine the compliance with this particulate limit. Record keeping requirement for the solid usage exist in the permit. Transfer efficiency and filter efficiency values are approved by IDEM (for details of these values, please refer 326 IAC 2-2 (PSD) rule applicability under 'State Rule Applicability Determination' section of this TSD).

Dry filter control efficiency testing for SA-2 has been removed from the permit because there are no particulate emissions from SA-2 (for details, please refer 'Potential to Emit After Issuance' section of this TSD).

The Compliance monitoring Requirements applicable to this modification are as follows:

| Emission Unit | Particulate Control | Parameter | Frequency |
|---|---|---|---|
| CD-3 | Dry Filters | filter inspection | Weekly |
| SP-2, booths of TLI coating line, and BPO2 Line | Dry Filters | filter inspection | Daily |
| CD-3, SP-2, booths of TLI coating line, and BPO2 Line | | overspray observation | Weekly |
| CD-3, SP-2, booths of TLI coating line, and BPO2 Line | | overspray on the rooftops and the nearby ground | Monthly |
| EU4, D2-MS1, D2-MS1-1, CO-1, CO-2, CO-3, PA-1, DH-1 stack exhausts (Stacks DC1-1, 20.1, and DC3-1), SDMC-2A, FDMC-2A, FDMC-2B, CO-4, DCS-2, MS-2, SDMC-2B, SMCDM-1 stack exhausts, TLI Cut Out, SDMC-2A, SDMC-2B, CO-4, SILO1, SILO2, Grinding and machining operations, FS-1, FS-2, FS-3, FS-4, DF-1, DF-2, DF-2 and DF-3 | Dust Collectors/Cyclone/ Baghouse | visible emission notations | Daily |
| EU4, D2-APP1, D2-MS1, D2-MS1-1, PA-1, DH-1, CO-1, CO-2, CO-3, DCS-1, SDMC-2A, FDMC-2A, FDMC-2B, CO-4, DCS-2, MS-2, SDMC-2B, SMCDM-1, TLI Cut Out, SDMC-2A, SDMC-2B, CO-4, SILO1, SILO2, DF-1, DF-2, DF-2 and DF-3 | Dust Collectors/Cyclone/ Baghouse | pressure drop | Daily |

To ensure that the particulate Control operate properly in order to comply with 326 IAC 2-2, 326 IAC 6-3-2, 326 IAC 2-7 (Part 70) and CAM.

## Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal No. T033-30711-00019 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.

## Conclusion

The operation of this stationary metal and fiberglass entry door manufacturing source shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T033-30711-00019.

## IDEM Contact

(a) Questions regarding this proposed permit can be directed to Mehul Sura at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-6868 or toll free at 1-800-451-6027 extension 3-6868.

(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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**VOC, HAP and Particulate**
**From Adhesive Operations EU2 and D2-APP1**

| Material | Density (lbs/gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (units/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) | Particulate Potential (tons/yr) | lbs VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | |
| **D2-APP1** | | | | | | | | | | | | | | | | |
| H.B. Fuller NP-2075-T | 8.51 | 3.91% | 0.0% | 3.91% | 0.00% | 100.00% | 0.04350 | 360.000 | 0.33 | 0.33 | 5.20 | 124.88 | 22.79 | -- | 0.33 | 100% |
| | | | | | | | | | | | | | | | | |
| **State Potential Emissions** | | | | | | | | | **Uncontrolled** | | **5.20** | **124.88** | **22.79** | **0.00** | | |
| | | | | | | | | | **Controlled** | | **5.20** | **124.88** | **22.79** | **#REF!** | | |

**METHODOLOGY**
Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/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

| Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Vinyl Acetate | Weight % MDI | Vinyl Acetate Emissions (ton/yr) | MDI Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|
| **EU2** | | | | | | | |
| H.B. Fuller NP-2075-T | 8.51 | 0.00705 | 360.000 | 0.03% | 3.88% | 0.028 | 3.67 |
| | | | | | | | |
| **D2-APP1** | | | | | | | |
| H.B. Fuller NP-2075-T | 8.51 | 0.04350 | 360.000 | 0.03% | 3.88% | 0.175 | 22.6 |

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

| Process | Throughput (units/hr) | Process Weight Rate (lbs/hr) | Emission Rate (lbs/unit) | Control Efficiency (%) | Potential Emissions (lbs/hour) | Potential Emissions (tons/year) | Potential Emissions after Control (lbs/hour) | Potential Emissions after Control (tons/year) |
|---|---|---|---|---|---|---|---|---|
| **EU4 - DC1** | | | | | | | | |
| EU4-1 | 360.00 | 16,200 | 0.321 | 99.0% | 115.56 | 506.15 | 1.156 | 5.06 |
| EU4-2 | 360.00 | 16,200 | 0.500 | 99.0% | 180.00 | 788.40 | 1.800 | 7.88 |
| EU4-3 | 240.00 | 10,800 | 0.040 | 99.0% | 9.60 | 42.05 | 0.096 | 0.420 |
| | | | | | | | **3.05** | **13.37** |
| **Door Assembly - DC2** | | | | | | | | |
| D2-MS1 | 360.00 | 18,000 | 0.706 | 99.0% | 254.16 | 1113.22 | 2.542 | 11.13 |
| D2-MS1-1 | 360.00 | 18,000 | 0.500 | 99.0% | 180.00 | 788.40 | 1.800 | 7.88 |
| | | | | | | | **4.34** | **19.02** |

**METHODOLOGY**
Potential Emissions (lbs/hr) = Throughput (units/hr) x Emission Rate (lbs/unit)
Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Potential Emissions after Control (lbs/hr) = Potential Emissions (lbs/hr) * (1 - Control Efficiency (%))
Potential Emissions after Control (tons/year) = Potential Emissions after Control (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Emission rates based on engineering data. Worst case assumed: all material lost is considered potential particulate emissions.

| Unit ID | Control Efficiency (%) | Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.) | Gas or Air Flow Rate (acfm.) | Emission Rate before Controls (lb/hr) | Emission Rate before Controls (tons/yr) | Emission Rate after Controls (lb/hr) | Emission Rate after Controls (tons/yr) |
|---|---|---|---|---|---|---|---|
| SILO1 | 99.0% | 0.010 | 2000.0 | 17.1 | 75.09 | 0.171 | 0.751 |
| SILO2 | 99.0% | 0.010 | 2000.0 | 17.1 | 75.09 | 0.171 | 0.751 |

**METHODOLOGY**
Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

| Process | Throughput (units/hr) | Process Weight Rate (lbs/hr) | Emission Rate (lbs/unit) | Control Efficiency (%) | Potential Emissions (lbs/hour) | Potential Emissions (tons/year) | Potential Emissions after Control (lbs/hour) | Potential Emissions after Control (tons/year) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| **DC3** | | | | | | | | |
| PA-1 | 11.25 | 765 | 0.300 | 99.0% | 3.38 | 14.78 | 0.034 | 0.148 |
| PA-1 | 11.25 | 765 | 0.300 | 99.0% | 3.38 | 14.78 | 0.034 | 0.148 |
| CO-1 | 50.00 | 2,450 | 0.980 | 99.0% | 49.00 | 214.62 | 0.490 | 2.146 |
| CO-2 | 50.00 | 2,450 | 0.980 | 99.0% | 49.00 | 214.62 | 0.490 | 2.146 |
| CO-3 | 50.00 | 2,450 | 0.980 | 99.0% | 49.00 | 214.62 | 0.490 | 2.146 |
| DH-1 | 15.63 | 703 | 0.320 | 99.0% | 5.00 | 21.90 | 0.050 | 0.219 |
| | | | | | | | **1.588** | **6.953** |
| | | | | | | | | |
| DCS-1 | 130.00 | 2,470 | 0.247 | 98.0% | 32.11 | 140.64 | 0.642 | 2.813 |
| | | | | | | | | |
| **Insignificant Activities** | | | | | | | | |
| FS-1 | 16.91 | 321 | 0.077 | 98.0% | 1.30 | 5.70 | 0.026 | 0.114 |
| FS-2 | 16.91 | 321 | 0.171 | 98.0% | 2.89 | 12.67 | 0.058 | 0.253 |
| FS-3 | 16.91 | 321 | 0.171 | 98.0% | 2.89 | 12.67 | 0.058 | 0.253 |
| FS-4 | 16.91 | 321 | 0.171 | 98.0% | 2.89 | 12.67 | 0.058 | 0.253 |
| CD-1 | 18.00 | 974 | 0.014 | 99.0% | 0.25 | 1.10 | 0.003 | 0.011 |
| | | | | | | | | |

**METHODOLOGY**

Potential Emissions (lbs/hr) = Throughput (units/hr) x Emission Rate (lbs/unit)
Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Potential Emissions after Control (lbs/hr) = Potential Emissions (lbs/hr) * (1 - Control Efficiency (%))
Potential Emissions after Control (tons/year) = Potential Emissions after Control (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Emission rates based on engineering data. Worst case assumed: all material lost is considered potential particulate emissions.
Emission rate for CD-1 based on AP-42 Table 11.12-2 (concrete batching)

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Fiberglass Press Operations**

| Press ID | Installation Date | SMC Capacity (lbs/hr) | Max VOC Content (Styrene) (%) | Emission Factor (%) | VOC and Styrene Potential (lbs/hr) | VOC and Styrene Potential (tons/yr) |
|---|---|---|---|---|---|---|
| 1 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 2 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 3 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 4 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 5 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 6 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 7 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 8 | 1989 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| | | | | | | |
| 9 | 1999 | 862.5 | 12.0% | 3.0% | 3.11 | 13.60 |
| | | | | | | |
| 11 | 2000 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 12 | 2000 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 13 | 2000 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 14 | 2000 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| | | | | | | |
| 15 | 2001 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 16 | 2001 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| | | | | | | |
| 17 | 2002 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 18 | 2002 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 19 | 2002 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 20 | 2002 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| | | | | | **17-20 Limit:** | **40.00** |
| | | | | | | |
| 21 | 2005 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 22 | 2005 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 23 | 2005 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 24 | 2005 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| 25 | 2005 | 1,067 | 10.9% | 3.0% | 3.49 | 15.28 |
| | | | | | **21-25 Limit:** | **37.68** |
| | | | | | | |
| **Total** | | | | | | **305.23** |

**METHODOLOGY**

IDEM approved emission factor taken from the former AP-42 Ch 4.4 for closed molding operations
Potential Emissions (lbs/hour) = SMC Capacity (lbs/hour) * VOC (Styrene) Content (%) * Emission Factor (%)
Potential Emissions (tons/year) = Potential Emissions (lbs/hour) * 8,760 hours/year / 2000 lbs/ton
All VOC is Styrene
SMC capacity and VOC/Styrene content is dependent on the size of mold used. The capacity and content used above represent the combination which results in the worst case emissions for each press.

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**From SMC Production**

| Material | SMC Usage (lbs/hour) | SMC Usage (tons/hour) | Emission Factor (lbs/ton) | Potential Emissions (lb/hr) | Potential Emissions (tons/yr) |
|---|---|---|---|---|---|
| | | | | | |
| **Resin Storage Tanks** | | | | | |
| VOC | 18,500 | 9.25 | 0.059 | 0.546 | 2.39 |
| Styrene | 18,500 | 9.25 | 0.059 | 0.546 | 2.39 |
| **Resin mixture** | | | | | |
| VOC | 18,500 | 9.25 | 0.19 | 1.758 | 7.70 |
| Styrene | 18,500 | 9.25 | 0.19 | 1.758 | 7.70 |
| **SMC Extruder** | | | | | |
| VOC | 18,500 | 9.25 | 0.30 | 2.775 | 12.2 |
| Styrene | 18,500 | 9.25 | 0.30 | 2.775 | 12.2 |
| **SMC Holding Area** | | | | | |
| VOC | 18,500 | 9.25 | 0.0018 | 0.017 | 0.073 |
| Styrene | 18,500 | 9.25 | 0.0018 | 0.017 | 0.073 |
| **State Potential Emissions** | | | | **Total VOC:** | **22.32** |
| | | | | **Total Styrene** | **22.32** |

**METHODOLOGY**

Potential Emissions Pounds per Hour = Tons of material used per hour * Emission factor (lbs/ton)

Potential VOC Tons per Year = Potential VOC Pounds per hour * 8760 hrs/yr / 2000 lbs/ton

Emission Factors are based on "Q and A: Composites Manufacturing Emissions" published by the CFA in 1999

Emission factors for the Mixing Station are based on emission factors approved by the Ohio EPA for the same process. These factors were based on a stack test.

Company Name: Therma Tru Corporation
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Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

Assume worst case: all PM = PM-10

| Process | Throughput (skins/hr) | Process Weight Rate (lbs/hr) | Emission Rate (lbs/unit) | Control Efficiency (%) | Potential Particulate Emissions (lbs/hour) | Potential Particulate Emissions (tons/year) | Particulate Emissions after Control (lbs/hour) | Particulate Emissions after Control (tons/year) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| DF-1 | 720.00 | 13,680 | 0.026 | 99.0% | 19.05 | 83.43 | 0.190 | 0.834 |
| | | | | | | | | |

**METHODOLOGY**

Potential Emissions (lbs/hr) = Throughput (skins/hr) x Emission Rate (lbs/skin)
Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Potential Emissions after Control (lbs/hr) = Potential Emissions (lbs/hr) * (1 - Control Efficiency (%))
Potential Emissions after Control (tons/year) = Potential Emissions after Control (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Emission rate based on engineering data. Worst case assumed: all material lost is considered potential particulate emissions. Data taken from test where fiberglass door skins were weighed before and after deflashing. For conservatism, all material lost was considered to be potential particulate emissions, even though much of the material removed during the process would not be considered particulate matter due to the size of the material being larger than 100 microns.

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

## VOC and Particulate

### BPO2 Coating Line

### Automated Line (6 booths): Coating Door Units

| Type of Coating | Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Volatiles | 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.26 | 62.62% | 55.84% | 6.79% | 71.19% | 28.81% | 0.1600 | 60 | 2.18 | 0.63 | 6.03 | 144.82 | 26.43 | 72.76 | 2.18 | 50% |
| Basecoat | AN White High Hide Basecoat 630-W029-155 | 12.10 | 39.91% | 35.71% | 4.20% | 51.86% | 40.73% | 0.1600 | 60 | 1.06 | 0.51 | 4.88 | 117.12 | 21.37 | 152.87 | 1.25 | 50% |
| Wiping Glaze | AN Dark & Red Mahogany Wiping Glaze, 644-B029-266 | 8.48 | 61.53% | 59.75% | 1.78% | 60.84% | 37.26% | 0.0200 | 60 | 0.38 | 0.15 | 0.18 | 4.34 | 0.79 | 8.57 | 0.40 | 50% |
| **Wiping Glaze New** | **AN Early American Wiping Glaze, 644-D029-265** | 9.00 | 56.85% | 55.18% | 1.67% | 61.50% | 38.50% | 0.0200 | 60 | 0.33 | 0.15 | 0.18 | 4.32 | 0.79 | **10.21** | 0.39 | 50% |
| **Stain (Rev.)** | **AN Breeze Golden Oak Spray Stain, 622-D029-14** | 8.43 | 93.17% | 91.03% | 2.14% | **94.43%** | 5.57% | 0.1000 | 60 | 2.27 | 0.18 | **1.08** | **25.92** | **4.73** | 7.56 | 3.23 | 50% |
| **Stain (Rev.)** | **AN Special Walnut Spray Stain, 622-D029-13** | 9.02 | **78.47%** | **76.81%** | **1.66%** | **85.09%** | 14.91% | 0.1000 | 60 | 1.01 | 0.15 | **0.90** | **21.60** | **3.94** | **25.52** | **1.70** | 50% |
| **Top Coat (Rev.)** | **AN Gloss 2K W/B Topcoat 670-HL029-15** | 8.60 | 77.13% | 72.33% | 4.81% | 74.70% | 20.06% | 0.3000 | 60 | 1.40 | 0.41 | 7.44 | 178.63 | 32.60 | **77.52** | 2.06 | 50% |
| **Top Coat New** | **AN 30 Sheen 2K W/B Topcoat 670-30L029-34** | 8.62 | 76.48% | 71.72% | 4.76% | 79.39% | 20.61% | 0.3000 | 60 | 1.61 | 0.41 | 7.38 | 177.12 | 32.32 | **79.92** | 2.02 | 50% |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.0210 | 60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 26.57 | 0.00 | 50% |
| Adhesive Promoter | AN Adhesion Promoter 50-C029-1715 | 7.31 | 95.00% | 0.0% | 95.0% | 0.0% | 4.54% | 0.0013 | 60 | 6.94 | 6.94 | 0.54 | 13.00 | 2.37 | 0.06 | 152.96 | 50% |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.00% | 0.0% | 0.0% | 0.0% | 0.00% | 0.0234 | 60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100% |
| Mineral Spirits | Mineral Spirits | 6.17 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.0117 | 60 | 6.17 | 6.17 | 4.33 | 103.98 | 18.98 | 0.00 | 0.00 | 100% |
| **Uncontrolled Potential Emissions** | | | | | | | | | | | | **18.53** | **444.77** | **85.90** | **295.15** | | |
| **Controlled Potential Emissions** | | | | | | | | | | | | **18.53** | **444.77** | **85.90** | **17.71** | | |
| **Limited Potential Emissions @100,000 units per year** | | | | | | | | | | | | **3.53** | **84.62** | **16.34** | **3.37** | | |

### New Manual Booths (3 slow moving product booths & paint kitchen): Coating Door Units

| Type of Coating | Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water | Weight % Organics | Volume % Volatiles | 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.26 | 62.62% | 55.80% | 6.82% | 71.20% | 28.81% | 0.1600 | 14 | 2.19 | 0.63 | 1.41 | 33.95 | 6.20 | 16.98 | 2.19 | 50% |
| Basecoat | AN White High Hide Basecoat 630-W029-155 | 12.10 | 39.91% | 35.70% | 4.21% | 51.90% | 40.73% | 0.1600 | 14 | 1.06 | 0.51 | 1.14 | 27.39 | 5.00 | 35.67 | 1.25 | 50% |
| Wiping Glaze | AN Dark & Red Mahogany Wiping Glaze, 644-B029-266 | 8.48 | 61.53% | 59.75% | 1.78% | 60.84% | 37.26% | 0.0200 | 14 | 0.38 | 0.15 | 0.042 | 1.01 | 0.185 | 2.00 | 0.40 | 50% |
| **Wiping Glaze New** | **AN Early American Wiping Glaze, 644-D029-265** | 9.00 | 56.85% | 55.18% | 1.67% | 61.50% | 38.50% | 0.0200 | 14 | 0.33 | 0.15 | 0.04 | 1.01 | 0.184 | **2.38** | 0.39 | 50% |
| **Stain (Rev.)** | **AN Breeze Golden Oak Spray Stain, 622-D029-14** | 8.43 | 93.17% | 91.03% | 2.14% | **94.4%** | 5.57% | 0.1000 | 14 | 2.27 | 0.18 | **0.25** | **6.05** | **1.10** | 1.76 | 3.23 | 50% |
| **Stain (Rev.)** | **AN Special Walnut Spray Stain, 622-D029-13** | 9.02 | **78.47%** | **76.8%** | **1.66%** | **85.1%** | 14.91% | 0.1000 | 14 | 1.01 | 0.15 | **0.21** | **5.04** | **0.92** | **5.95** | **1.70** | 50% |
| **Top Coat (Rev.)** | **AN Gloss 2K W/B Topcoat 670-HL029-15** | 8.60 | 77.13% | 72.33% | 4.81% | 74.70% | 20.06% | 0.3000 | 14 | 1.40 | 0.41 | 1.74 | 41.68 | 7.61 | **18.09** | 2.06 | 50% |
| **Top Coat New** | **AN 30 Sheen 2K W/B Topcoat 670-30L029-34** | 8.62 | 76.48% | 71.72% | 4.76% | 79.39% | 20.61% | 0.3000 | 14 | 1.61 | 0.41 | 1.72 | 41.33 | 7.54 | **18.65** | 2.02 | 50% |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.0210 | 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.20 | 0.00 | 50% |
| Adhesive Promoter | AN Adhesion Promoter 50-C029-1715 | 7.31 | 95.00% | 0.00% | 95.00% | 0.00% | 4.54% | 0.0013 | 14 | 6.94 | 6.94 | 0.13 | 3.03 | 0.55 | 0.01 | 152.96 | 50% |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.0234 | 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100% |
| Mineral Spirits | Mineral Spirits | 6.17 | 100.00% | 0.00% | 100.00% | 0.00% | 0.00% | 0.0117 | 14 | 6.17 | 6.17 | 1.01 | 24.26 | 4.43 | 0.00 | 0.00 | 100% |
| **Uncontrolled Potential Emissions** | | | | | | | | | | | | **4.58** | **109.99** | **20.07** | **68.87** | | |
| **Controlled Potential Emissions** | | | | | | | | | | | | **4.58** | **109.99** | **20.07** | **4.13** | | |
| **Limited Potential Emissions @ 26,000 units per year** | | | | | | | | | | | | **0.97** | **23.32** | **4.26** | **0.88** | | |
| **Total Limited Potential Emissions for BPO2 Paint Line** | | | | | | | | | | | | **4.50** | **107.94** | **20.60** | **4.25** | | |

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

## HAP Emission Calculations
### BPO2 Coating Line

New Paint Line (6 booths): Coating Door Units

| Type of Coating | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Chlorobenzene | Weight % Ethyl Benzene | Weight % riethylamin | Weight % Butoxyethanol | Weight % Methanol | Glycol Ether Weight % | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Chlorobenzene Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) | Triethyla mine Emissions (ton/yr) | Butoxyethoxyethanol Emissions (ton/yr) | Methanol Emissions (ton/yr) | Glycol Ether Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.26 | 0.1600 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.13% | 4.35% | 0.03% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 16.94 | 0.10 |
| Wiping Glaze | AN Dark & Red Mahogany Wiping Glaze, 644-B029-26 | 8.48 | 0.0200 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.29% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 |
| Stain | AN Breeze Golden Oak Spray Stain, 622-D029-14 | 8.43 | 0.1000 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.29% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.64 | 0.00 | 0.00 | 0.00 |
| **Top Coat New** | **AN 30 Sheen 2K W/B Topcoat 670-30L029-34** | 8.62 | 0.3000 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.14% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.96 |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.0210 | 60 | 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 | 0.00 | 0.00 | 0.00 |
| Adhesive Promoter | AN Adhesion Promoter 50-C029-1715 | 7.31 | 0.0013 | 60 | 11.89% | 81.13% | 0.28% | 1.70% | 0.00% | 0.00% | 0.00% | 0.00% | 0.30 | 2.03 | 0.01 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.0234 | 60 | 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 | 0.00 | 0.00 | 0.00 |
| Mineral Spirits | Mineral Spirits | 6.17 | 0.0117 | 60 | 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 | 0.00 | 0.00 | 0.00 |
| **Controlled Potential Emissions** | | | | | | | | | | | | | **0.30** | **2.03** | **0.01** | **0.04** | **0.77** | **0.52** | **16.94** | **1.06** |
| **Limited Potential Emissions @100,000 units per year** | | | | | | | | | | | | | **0.06** | **0.39** | **0.001** | **0.01** | **0.15** | **0.10** | **3.22** | **0.20** |

New Manual Booths (3 slow moving product booths & paint kitchen): Coating Door Units

| Type of Coating | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Chlorobenzene | Weight % Ethyl Benzene | Weight % riethylamin | Weight % Butoxyethanol | Weight % Methanol | Glycol Ether Weight % | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Chlorobenzene Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) | Triethyla mine Emissions (ton/yr) | Butoxyethoxyethanol Emissions (ton/yr) | Methanol Emissions (ton/yr) | Glycol Ether Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.26 | 0.1600 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.13% | 4.35% | 0.03% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 3.95 | 0.02 |
| Wiping Glaze | AN Dark & Red Mahogany Wiping Glaze, 644-B029-26 | 8.48 | 0.0200 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.29% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| Stain | AN Breeze Golden Oak Spray Stain, 622-D029-14 | 8.43 | 0.1000 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.29% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 |
| **Top Coat New** | **AN 30 Sheen 2K W/B Topcoat 670-30L029-34** | 8.62 | 0.3000 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.14% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.0210 | 14 | 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 | 0.00 | 0.00 | 0.00 |
| Adhesive Promoter | AN Adhesion Promoter 50-C029-1715 | 7.31 | 0.0013 | 14 | 11.89% | 81.13% | 0.28% | 1.70% | 0.00% | 0.00% | 0.00% | 0.00% | 0.07 | 0.47 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.0234 | 14 | 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 | 0.00 | 0.00 | 0.00 |
| Mineral Spirits | Mineral Spirits | 6.54 | 0.0117 | 14 | 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 | 0.00 | 0.00 | 0.00 |
| **Controlled Potential Emissions** | | | | | | | | | | | | | **0.07** | **0.47** | **0.00** | **0.01** | **0.18** | **0.12** | **3.95** | **0.25** |
| **Limited Potential Emissions @ 26,000 units per year** | | | | | | | | | | | | | **0.01** | **0.10** | **0.000** | **0.00** | **0.04** | **0.03** | **0.84** | **0.05** |
| **Total Limited Potential Emissions for 2011 Paint Line** | | | | | | | | | | | | | **0.07** | **0.49** | **0.002** | **0.01** | **0.18** | **0.12** | **4.06** | **0.25** |

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Steel Door Foaming Operation (SF-2)**

| **MDI/VOC Calculation** | | |
|---|---|---|
| Maximum L | 10.0 | lbs |
| Doors per h | 360 | |
| Lbs of Foar | 3600 | |
| Reporting ( | 0.67 | lb/MMlbs of foam |
| PTE for MD | 0.002 | lb/hr |
| Hours of op | 8760 | |
| PTE for MD | 21.13 | lb/yr |
| PTE for MD | 0.0106 | ton/yr |

**Fiberglass Door Foaming Operation (FF-2)**

| **MDI/VOC Calculation** | | |
|---|---|---|
| Maximum L | 10.0 | lbs |
| Doors per h | 360 | |
| Lbs of Foar | 3600 | |
| Reporting ( | 0.67 | lb/MMlbs of foam |
| Hours of op | 8760 | |
| PTE for MD | 0.002 | lb/hr |
| PTE for MD | 21.13 | lb/yr |
| PTE for MD | 0.0106 | ton/yr |

Emission factors provided by the source are based on MDI/Polymeric MDI Emissions Reporting Guidelines for PTE for MDI/VOC (ton/yr) = Doors per hour x Maximum lbs of Foam per door x (1/1000,000) (lb/MMlbs) x emission factor (lb/MMlbs of foam) x 8760 (hr/yr) / 2000

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Machining Operations**

| Process | Feed Material | Throughput (units/hr) | Process Weight Rate (lb/hr) | PM/PM10 Emission factor (lb/unit) | Control | Efficiency (%) | Uncontrolled Emissions (lb/hr) | Uncontrolled Emissions (ton/yr) | Controlled Emission (lb/hr) | Controlled Emission (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|
| Cut Out Machine (CO-4) | steel, fiberglass, wood and foam | 50 | 2,450 | 0.98 | baghouse | 99% | 49.00 | 214.62 | 0.49 | 2.15 |
| Double Cut Saw (DCS-2) | fiberglass | 130 | 2,470 | 0.247 | baghouse | 99% | 32.11 | 140.64 | 0.32 | 1.41 |
| Fiberglass Machining (FDMC-2A) | fiber glass, foam and wood | 360 | 18,000 | 0.706 | baghouse | 99% | 254.16 | 1,113.22 | 2.54 | 11.13 |
| Fiberglass Online Boring Center (FDMC-2B) | wood material | 360 | 18,000 | 0.5 | baghouse | 99% | 180.00 | 788.40 | 1.80 | 7.88 |
| Miscellaneous Sawing/Trimming (MS-2) | steel, fiberglass, wood and foam | 130 | 2,470 | 0.375 | baghouse | 99% | 48.75 | 213.53 | 0.49 | 2.14 |
| Steel Door Boring (SDMC-2A) | wood or wood composite | 360 | 16,200 | 0.01 | cyclone | 86% | 3.60 | 15.77 | 0.50 | 2.21 |
| Steel Door End Rail Boring (SDMC-2B) | wood or wood composite | 360 | 16,200 | 0.04 | cyclone | 86% | 14.40 | 63.07 | 2.02 | 8.83 |
| MJ Machining Center (EU4) | steel, fiberglass, wood and foam | 360 | 16,200 | 0.321 | cyclone | 86% | 115.56 | 506.15 | 16.18 | 70.86 |

**Methodology**
Emission factors provided by the source are based on sieve analysis performed by the source.
Uncontrolled PTE = Emission Factor (lb/unit) x Throughput (units/hr) x (1/2000) (lb/ton) x 8760 (hr/yr)
Controlled PTE = Uncontrolled PTE X (1-Control Efficiency)

**Mixer**

| | | | |
|---|---|---|---|
| SMC Dry Collections = | 3300 lb supersack unloading per 10 hours = 33 lb/hr | | |
| | = | 33 lb/hr x 8760 hours/yr = | **289,080 lb/yr (throughput)** |
| | = | 3 % loss factor potentially= | **4.34 ton/yr Uncontrolled PM/PM10** |
| | = | *99 % control efficiency=* | **0.04 ton/yr After Control PM/PM10** |

**Methodology**
The loss factor (emission factor) has been provided by the source.
Uncontrolled Emissions = supersack unloading (lb/hr) x loss factor (0.03 lb/lbs of supersack unloading) x (1/2000) (lb/ton) x 8760 (hr/yr)
Controlled PTE = Uncontrolled PTE X (1-Filter Efficiency)

**Cold Cleaner**

| Unit ID | Unit Description | Product Manufacturer | Product Name | Number of Cold Cleaner Degreaser Units | Net Product Usage per Degreaser | Total Product Usage | Density | Pounds VOC per gallon degreasing material | Average VOC Emissions | VOC Emissions | VOC Emissions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | gal/day | gal/day | lb/gal | lb/gal | (lb/hr) | (lb/day) | (tpy) |
| CC-2 | Oscillating Cold Solvent Washer | Chemical Solvents, Inc. | TM1-138 (1-Methoxy-2 Propyl Acetate) | 1 | 1.0 | 1.0 | 7.00 | 7.00 | 0.29 | 7.00 | 1.28 |

**Methodology**
Potential VOC Pounds per Day = Pounds VOC per gallon degreasing material (lb/gal) x usage rate (gal/day) x 365 (days/yr) x (1/2000) (lb/ton)

Assume all PM = PM10

| Process | Throughput (skins/hr) | Process Weight Rate (lbs/hr) | Emission Rate (lbs/unit) | Control Efficiency (%) | Potential Particulate Emissions (lbs/hour) | Potential Particulate Emissions (tons/year) | Emissions after Control (lbs/hour) | Potential Emissions after Control (tons/year) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| DF-2 | 720.00 | 13,680 | 0.026 | 99.0% | 19.05 | 83.43 | 0.190 | 0.834 |
| | | | | | | | | |
| | | | | | | | | |

**METHODOLOGY**
Potential Emissions (lbs/hr) = Throughput (skins/hr) x Emission Rate (lbs/skin)
Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Potential Emissions after Control (lbs/hr) = Potential Emissions (lbs/hr) * (1 - Control Efficiency (%))
Potential Emissions after Control (tons/year) = Potential Emissions after Control (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Emission rate based on engineering data. Worst case assumed: all material lost is considered potential particulate emissions. Data taken from test where fiberglass door skins were weighed before and after deflashing. All material lost was considered to be potential particulate emissions, even though much of the material removed during the process would not be considered particulate matter due to the size of the material being larger than 100 microns.

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**VOC and Particulate**
**From TLI Coating Line**

TLI Automatic Line (5 booths): Coating Door Units - Before Controls

| Type of Coating | 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.26 | 62.62% | 55.8% | 6.8% | 71.2% | 28.81% | 0.1600 | 60 | 2.18 | 0.63 | 6.03 | 144.82 | 26.43 | 72.76 | 2.18 | 50% |
| Basecoat | AN White High Hide Basecoat 630-W029-155 | 12.10 | 39.91% | 35.7% | 4.2% | 51.9% | 40.73% | 0.1600 | 60 | 1.06 | 0.51 | 4.88 | 117.12 | 21.37 | 152.87 | 1.25 | 50% |
| Glaze | AN Phase II Walnut W/B Wiping Glaze 644-D029-188 | 9.81 | 53.96% | 50.9% | 3.1% | 60.0% | 36.43% | 0.0200 | 60 | 0.75 | 0.30 | 0.36 | 8.65 | 1.58 | 11.87 | 0.82 | 50% |
| Top Coat | AN Gloss 2K W/B Topcoat 670-HL029-15 | 8.60 | 77.13% | 72.3% | 4.8% | 74.7% | 20.06% | 0.3000 | 60 | 1.63 | 0.41 | 7.44 | 178.63 | 32.60 | 77.52 | 2.06 | 50% |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.00% | 0.0% | 0.0% | 0.0% | 100.00% | 0.0210 | 60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 26.57 | 0.00 | 50% |
| Adhesive Promoter ** | AN Adhesion Promoter 50-C029-1715 | 7.31 | 95.00% | 0.0% | 95.0% | 0.0% | 4.54% | 0.0013 | 60 | 6.94 | 6.94 | 0.54 | 13.00 | 2.37 | 0.06 | 152.96 | 50% |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.00% | 0.0% | 0.0% | 0.0% | 0.00% | 0.0234 | 60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100% |
| Alcohol | AN Alcohol 50-L029-272 | 6.54 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.0117 | 60 | 6.54 | 6.54 | 4.59 | 110.19 | 20.11 | 0.00 | 0.00 | 100% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | | **18.97** | **455.28** | **83.09** | **268.90** | | |

TLI Automatic Line (5 booths): Coating Patio Skin Units - Before Controls

| Type of Coating | 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Polycoat | SW Polane F63UXN8746-1402 | 11.14 | 30.34% | 0.0% | 30.3% | 0.0% | 53.00% | 0.0198 | 50 | 3.38 | 3.38 | 3.35 | 80.31 | 14.66 | 16.82 | 6.38 | 50% |
| Polycoat | SW Polane F63UXW8784-1402 | 12.03 | 26.18% | 0.0% | 26.2% | 0.0% | 56.00% | 0.0198 | 50 | 3.15 | 3.15 | 3.12 | 74.83 | 13.66 | 19.25 | 5.62 | 50% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | | **3.35** | **80.31** | **14.66** | **19.25** | | |

TLI Manual Booths (2 slow moving product booths & paint kitchen): Coating Door Units - Before Controls

| Type of Coating | 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.3 | 62.62% | 55.8% | 6.8% | 71.2% | 28.81% | 0.1600 | 14 | 2.19 | 0.63 | 1.41 | 33.95 | 6.20 | 16.98 | 2.19 | 50% |
| Basecoat | AN White High Hide Basecoat 630-W029-155 | 12.1 | 39.91% | 35.7% | 4.2% | 51.9% | 40.73% | 0.1600 | 14 | 1.06 | 0.51 | 1.14 | 27.39 | 5.00 | 35.67 | 1.25 | 50% |
| Glaze | AN Phase II Walnut W/B Wiping Glaze 644-D029-188 | 9.8 | 53.96% | 50.9% | 3.1% | 60.0% | 36.43% | 0.0200 | 14 | 0.75 | 0.30 | 0.08 | 2.02 | 0.37 | 2.77 | 0.82 | 50% |
| Top Coat | AN Gloss 2K W/B Topcoat 670-HL029-15 | 8.6 | 77.13% | 72.3% | 4.8% | 74.7% | 20.06% | 0.3000 | 14 | 1.64 | 0.42 | 1.74 | 41.87 | 7.64 | 18.09 | 2.07 | 50% |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 0.0 | 0.00% | 0.0% | 0.0% | 0.0% | 0.00% | 0.0210 | 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 50% |
| Adhesive Promoter ** | AN Adhesion Promoter 50-C029-1715 | 7.3 | 95.00% | 0.0% | 95.0% | 0.0% | 4.54% | 0.0013 | 14 | 6.94 | 6.94 | 0.13 | 3.03 | 0.55 | 0.01 | 152.96 | 50% |
| Acetone | AN Acetone 50-L029-280 | 6.6 | 0.00% | 0.0% | 0.0% | 0.0% | 0.00% | 0.0234 | 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100% |
| Alcohol | AN Alcohol 50-L029-272 | 6.5 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.0117 | 14 | 6.54 | 6.54 | 1.07 | 25.71 | 4.69 | 0.00 | 0.00 | 100% |
| **State Potential Emissions** | | | **Add worst case coating to all solvents** | | | | | | | | | **4.44** | **106.58** | **19.45** | **56.54** | | |

**This coating is only used when coating plastic parts. **344.69**

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**HAP Emission Calculations**
**From TLI Coating Line**

TLI Automatic Line (5 booths): Coating Door Units

| Type of Coating | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Chlorobenzene | Weight % Ethyl Benzene | Weight % Triethylamine | Weight % Butoxyethanol | Weight % Methanol | Glycol Ether Weight % | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Chlorobenzene Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) | Triethylamine Emissions (ton/yr) | Butoxyethoxyethanol Emissions (ton/yr) | Methanol Emissions (ton/yr) | Glycol Ether Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Basecoat | AN Earthtone Brown 630-D029-146 | 9.26 | 0.1600 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.13% | 4.35% | 0.03% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 16.94 | 0.10 |
| Basecoat | AN White High Hide Basecoat 630-W029-155 | 12.1 | 0.1600 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% | 2.69% | 0.02% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 13.70 | 0.08 |
| Glaze | AN Phase II Walnut W/B Wiping Glaze 644-D029-188 | 9.81 | 0.0200 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.18% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 |
| Top Coat | AN Gloss 2K W/B Topcoat 670-HL029-15 | 8.6 | 0.3000 | 60 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.11% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.0210 | 60 | 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 | 0.00 | 0.00 | 0.00 |
| Adhesive Promoter ** | AN Adhesion Promoter 50-C029-1715 | 7.31 | 0.0013 | 60 | 11.89% | 81.13% | 0.28% | 1.70% | 0.00% | 0.00% | 0.00% | 0.00% | 0.30 | 2.03 | 0.01 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.0234 | 60 | 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 | 0.00 | 0.00 | 0.00 |
| Alcohol | AN Alcohol 50-L029-272 | 6.54 | 0.0117 | 60 | 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 | 0.00 | 0.00 | 0.00 |
| Total State Potential Emissions | | | | | | | | | | | | | **0.30** | **2.03** | **0.01** | **0.04** | **0.09** | **1.26** | **16.94** | **0.10** |

TLI Automatic Line (5 booths): Patio Skin Units

| Type of Coating | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Formaldehyde | Weight % Benzene | Weight % Hexane | Weight % Glycol Ethers | Weight % Methanol | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Formaldehyde Emissions (ton/yr) | Benzene Emissions (ton/yr) | Hexane Emissions (ton/yr) | Glycol Ethers Emissions (ton/yr) | Methanol Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Polycoat | SW Polane F63UXN8746-1402 | 11.14 | 0.0198 | 50 | 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 | 0.00 |
| Polycoat | SW Polane F63UXW8784-1402 | 12.03 | 0.0198 | 50 | 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 | 0.00 |
| Total State Potential Emissions | | | | | | | | | | | | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

TLI Manual Booths (2 slow moving product booths & paint kitchen): Coating Door Units

| Type of Coating | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Chlorobenzene | Weight % Ethyl Benzene | Weight % Triethylamine | Weight % Butoxyethanol | Weight % Methanol | Glycol Ether Weight % | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Chlorobenzene Emissions (ton/yr) | Ethyl Benzene Emissions (ton/yr) | Triethylamine Emissions (ton/yr) | Butoxyethoxyethanol Emissions (ton/yr) | Methanol Emissions (ton/yr) | Glycol Ether Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ` | AN Earthtone Brown 630-D029-146 | 9.26 | 0.1600 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.13% | 4.35% | 0.03% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 3.95 | 0.02 |
| Basecoat | AN White High Hide Basecoat 630-W029-155 | 12.1 | 0.1600 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.02% | 2.69% | 0.01% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 3.20 | 0.02 |
| Glaze | AN Phase II Walnut W/B Wiping Glaze 644-D029-188 | 9.81 | 0.0200 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.18% | 0.00% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Top Coat | AN Gloss 2K W/B Topcoat 670-HL029-15 | 8.6 | 0.3000 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.11% | 0.00% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 |
| Top Coat Activator | AN W/B Urethane Catalyst 649-PJ029-38 | 9.63 | 0.0210 | 14 | 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 | 0.00 | 0.00 | 0.00 |
| Adhesive Promoter ** | AN Adhesion Promoter 50-C029-1715 | 7.31 | 0.0013 | 14 | 11.89% | 81.13% | 0.28% | 1.70% | 0.00% | 0.00% | 0.00% | 0.00% | 0.07 | 0.47 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Acetone | AN Acetone 50-L029-280 | 6.59 | 0.0234 | 14 | 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 | 0.00 | 0.00 | 0.00 |
| Alcohol | AN Alcohol 50-L029-272 | 6.54 | 0.0117 | 14 | 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 | 0.00 | 0.00 | 0.00 |
| Total State Potential Emissions | | | | | | | | | | | | | **0.07** | **0.47** | **0.00** | **0.01** | **0.02** | **0.29** | **3.95** | **0.02** |

**This coating is only used when coating plastic parts.

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**VOC and Particulate**
**From Unit CD-3**

Concrete Door Glue Operation: Coating Door Skin Units

| Type of Coating | 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLUE | PPG T7850 Trim-Bond Contact Adh. | 8.85 | 51.03% | 44.7% | 6.3% | 47.5% | 45.22% | 0.2000 | 24 | 1.06 | 0.56 | 2.67 | 64.13 | 11.70 | 45.56 | 1.23 | 50% |
| | HB FULLER WB3628 MY 449 | 8.90 | 45.00% | 39.7% | 5.3% | 47.5% | 55.00% | 0.0900 | 150 | 0.90 | 0.47 | 6.37 | 152.83 | 27.89 | 86.83 | 0.86 | 70% |

**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

Concrete Door Glue Operation: Coating Door Skin Units

| Type of Coating | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Glycol Ether | Glycol Ether Emissions (ton/yr) |
|---|---|---|---|---|---|---|
| GLUE | PPG T7850 Trim-Bond Contact Adh. | 8.85 | 0.2000 | 24 | 0.00% | 0.00 |

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**FCO-2 and SCO-2**

| Unit ID | Heat Input Capacit MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|---|
| SCO-2 | 2 | 17.52 |
| FCO-2 | 0.249 | 2.18 |
| | 2.249 | 19.70 |

Criteria Pollutant

| | PM* | PM10* | SO2 | Nox** | VOC | CO |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 100.0 | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.075 | 0.075 | 0.006 | 0.985 | 0.054 | 0.827 |

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 | 0.00002 | 0.00001 | 0.00074 | 0.018 | 0.00003 |

HAPs - Metals

| | Lead | Cadmium | Chromium | Manganese | Nickel | Total |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 | HAPs |
| Potential Emission in tons/yr | 0.000005 | 0.000011 | 0.000014 | 0.000004 | 0.000021 | 0.019 |

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

**Emission Factors for Nox are based on uncontrolled emissions.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**VOC and Particulate**
**TLI-8 Surface Coating Operations**

| 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 | Particulate Potential (ton/yr) | Transfer Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AN Earthone Brown 630-D029-146 | 9.3 | 62.58% | 55.8% | 6.8% | 0.0% | 28.81% | 0.16000 | 7.000 | 0.63 | 0.63 | 0.70 | 16.88 | 3.08 | 8.50 | 50% |
| AN White High Hide Basecoat 630-W029-155 | 12.1 | 4.10% | 0.0% | 4.1% | 0.0% | 0.00% | 0.16000 | 7.000 | 0.50 | 0.50 | 0.56 | 13.43 | 2.45 | 28.46 | 50% |
| AN Phase II Walnut W/B Wiping Glaze 644-D029-188 | 9.8 | 53.97% | 50.9% | 3.1% | 0.0% | 59.96% | 0.02000 | 7.000 | 0.30 | 0.30 | 0.04 | 1.01 | 0.18 | 1.38 | 50% |
| AN Gloss 2K W/B Topcoat 670-HL029-15 | 8.6 | 77.11% | 72.3% | 4.8% | 0.0% | 20.06% | 0.30000 | 7.000 | 0.41 | 0.41 | 0.87 | 20.85 | 3.80 | 9.05 | 50% |
| AN W/B Urethane Catalyst 649-PJ029-38 | 9.6 | 0.00% | 0.0% | 0.0% | 0.0% | 100.00% | 0.02100 | 7.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.10 | 50% |
| AN Adhesion Promoter 50-C029-1715 | 7.3 | 95.00% | 0.0% | 95.0% | 0.0% | 4.54% | 0.00130 | 7.000 | 6.94 | 6.94 | 0.06 | 1.52 | 0.28 | 0.01 | 50% |
| AN Acetone 50-L029-280 | 6.6 | 0.00% | 0.0% | 0.0% | 0.0% | 0.00% | 0.02340 | 7.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100% |
| AN Alcohol 50-L029-272 | 6.5 | 100.00% | 0.0% | 100.0% | 0.0% | 0.00% | 0.01170 | 7.000 | 6.54 | 6.54 | 0.54 | 12.86 | 2.35 | 0.00 | 100% |
| **Potential Emissions** | | | **Worst case coating to all solvents** | | | | | | | | **2.77** | **66.54** | **12.14** | **50.51** | |
| METHODOLOGY | | | | | | | | | | | **Controlled particulate emissions:** | | | **3.03** | |

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)
Total = Worst Coating + Sum of all solvents used
Controlled Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs) *(1-control efficiency)
Control Efficiency = 94%

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**TLI-8 HAP Emission Calculations**

| Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Toluene | Weight % Formaldehyde | Weight % Benzene | Weight % Hexane | Weight % Glycol Ethers | Weight % Methanol | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Formaldehyde Emissions (ton/yr) | Benzene Emissions (ton/yr) | Hexane Emissions (ton/yr) | Glycol Ethers Emissions (ton/yr) | Methanol Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AN Earthone Brown 630-D029-146 | 9.3 | 0.16000 | 7.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.14% | 4.35% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 1.98 |
| AN White High Hide Basecoat 630-W029-155 | 12.1 | 0.16000 | 7.000 | 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 | 0.00 |
| AN Phase II Walnut W/B Wiping Glaze 644-D029-188 | 9.8 | 0.02000 | 7.000 | 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 | 0.00 |
| AN Gloss 2K W/B Topcoat 670-HL029-15 | 8.6 | 0.30000 | 7.000 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.11% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 |
| AN W/B Urethane Catalyst 649-PJ029-38 | 9.6 | 0.02100 | 7.000 | 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 | 0.00 |
| AN Adhesion Promoter 50-C029-1715 | 7.3 | 0.00130 | 7.000 | 11.89% | 81.13% | 0.00% | 1.70% | 0.00% | 0.00% | 0.00% | 0.03 | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AN Acetone 50-L029-280 | 6.6 | 0.02340 | 7.000 | 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 | 0.00 |
| AN Alcohol 50-L029-272 | 6.5 | 0.01170 | 7.000 | 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 | 0.00 |
| Potential Emissions | | | | | | | | | | | **0.03** | **0.24** | **0.00** | **0.00** | **0.00** | **0.15** | **1.98** |

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Particulate Emissions for Deflashing Station (DF-3)**

| Process | Throughput (skins/hr) | Process Weight Rate (lbs/hr) | Emission Rate (lbs/unit) | Control Efficiency (%) | Potential Particulate Emissions (lbs/hour) | Potential Particulate Emissions (tons/year) | Potential Emissions after Control (lbs/hour) | Potential Emissions after Control (tons/year) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| DF-3 | 720.00 | 13,680 | 0.026 | 99.0% | 19.05 | 83.43 | 0.190 | 0.834 |

**METHODOLOGY**

Potential Emissions (lbs/hr) = Throughput (skins/hr) x Emission Rate (lbs/skin)
Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Potential Emissions after Control (lbs/hr) = Potential Emissions (lbs/hr) * (1 - Control Efficiency (%))
Potential Emissions after Control (tons/year) = Potential Emissions after Control (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Emission rate is based on engineering data. Worst case assumed: all material lost is considered potential particulate emissions.

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Particulate Emissions from TLI line**

**Miscellaneous TLI Sawing**

| Process | Throughput (units/hr) | Process Weight Rate (lb/hr) | PM/PM10 Emission factor (lb/unit) | Control Efficiency (%) | Uncontrolled PTE (lb/hr) | Uncontrolled PTE (ton/yr) | Controlled PTE (lb/hr) | Controlled PTE (ton/yr) |
|---|---|---|---|---|---|---|---|---|
| TLI Miscellaneous Sawing/Trimming | 30 | 1,650 | 0.375 | 86% | 11.25 | 49.28 | 1.58 | 6.90 |

This operation will be controlled by the cyclone, TLI DC-1.

**TLI Cut Out**

| Process | Throughput (units/hr) | Process Weight Rate (lb/hr) | PM/PM10 Emission factor (lb/unit) | Control Efficiency (%) | Uncontrolled PTE (lb/hr) | Uncontrolled PTE (ton/yr) | Controlled PTE (lb/hr) | Controlled PTE (ton/yr) |
|---|---|---|---|---|---|---|---|---|
| TLI Cut Out Machine | 25 | 1,375 | 0.98 | 86% | 24.50 | 107.31 | 3.43 | 15.02 |

This operation will be controlled by the cyclone, TLI DC-1.

**METHODOLOGY**
Potential Emissions (lbs/hr) = Throughput (units/hr) x Emission Rate (lbs/unit)
Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Potential Emissions after Control (lbs/hr) = Potential Emissions (lbs/hr) * (1 - Control Efficiency (%))
Potential Emissions after Control (tons/year) = Potential Emissions after Control (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)
Emission factors are based on engineering data. Worst case assumed: all material lost is considered potential particulate emissions.

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

Coating Operations (SP-2, SA-2, and FA-2)

**VOC and Particulate Emissions**

| Emission Unit | Material | Density (Lb/Gal) | Weight % non regulated and regulated Volatile (H20 & Organics) | Weight % regulated Volatile organics and H20 | Weight % Water | Weight % regulated Organics | Volume % Water | Wt % 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 | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency | Control Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steel Door Gluing (SA-2) | H.B. Fuller NP-2075 | 8.4 | 6.90% | 0.04% | 0.0% | 0.039% | 0.0% | 93.10% | 0.19800 | 360 | 0.003 | 0.003 | 0.23 | 5.60 | 1.02 | -- | 0.004 | 100% | -- |
| Fiberglass Gluing (FA-2) | H.B. Fuller NP-2075 | 8.4 | 6.90% | 0.04% | 0.0% | 0.039% | 0.0% | 93.10% | 0.03000 | 360 | 0.003 | 0.003 | 0.04 | 0.85 | 0.15 | -- | 0.004 | 100% | -- |
| Steel Door Enclosed Spray Coating (SP-2) | Antique White W/R Primer | 10.98 | 57.92% | 57.92% | 52.9% | 5.1% | 0.0% | 42.08% | 0.13950 | 360 | 0.56 | 0.56 | 27.96 | 670.96 | 122.45 | 508.16 | 1.32 | 50% | 95.0% |

METHODOLOGY
PM=PM10=PM2.5
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)

## HAPs Emissions

| Emission Unit | Material | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % MDI | Weight % Vinyl Acetate | Weight % Formaldehyde | Weight % Benzene | Weight % Hexane | Weight % Glycol Ethers | Weight % Methanol | Xylene Emissions (ton/yr) | Toluene Emissions (ton/yr) | Formaldehyde Emissions (ton/yr) | Benzene Emissions (ton/yr) | Hexane Emissions (ton/yr) | Glycol Ethers Emissions (ton/yr) | Methanol Emissions (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SA-2 | H.B. Fuller NP-2075 | 8.4 | 0.198000 | 360.00 | 0.04% | 3.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.02 | 78.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FA-2 | PPG Heat Activated Trim Bond R-T-S (T7850) | 8.4 | 0.030000 | 360.00 | 0.04% | 3.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.15 | 11.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SP-2 | Antique White W/R Primer | 10.98 | 0.139500 | 360.00 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.92% | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 70.52 | 0.00 |

**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

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

| Unit ID | Line | Maximum Production Rate (units/hour) | Aver Amount Foam Used per Unit (lbs/unit) | Foam Usage (lbs/hour) | Potential Foam Usage (lbs/year) | Percentage of Blowing Agent in Foam (% by weight) | VOC Release Rate (%)[1] | VOC Content % of Blowing Agent | Potential VOC Emissions (lbs/hour)[2] | Potential VOC Emissions (lbs/year)[2] | Potential VOC Emissions (tons/year)[2] | Anticipated Actual VOC Emissions (ton/yr)[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SF-2 | Door Assembly A-Line | 360.0 | 5.0 | 1800.0 | 15,768,000.0 | 6.00 | 5.00 | 100.00 | 5.40 | 47,304.00 | 23.65 | 12.50 |
| D2-F1 | Door Assembly B-Line | 360.0 | 5.0 | 1800.0 | 15,768,000.0 | 6.00 | 5.00 | 100.00 | 5.40 | 47,304.00 | 23.65 | 12.50 |
| FF-2 | Door Assembly C-Line | 360.0 | 5.0 | 1800.0 | 15,768,000.0 | 6.00 | 5.00 | 100.00 | 5.40 | 47,304.00 | 23.65 | 12.50 |
| | | | | | | | | | | | | |
| | | | | | | | | **Total** | **16.20** | **141,912.00** | **70.96** | **37.50** |

**Notes:**
Maximum production rate and foam usage per unit was supplied by Therma Tru
[1] VOC release rate (5%) based on documentation provided by Cannon USA, See Process Description
[2]Potential emissions based on operating at maximum production rates for 8,760 hours per year.
[3]Actual emissions based on maximum 5,000,000 doors produced from all 3 lines per year.

**Example Calculations**
Potential VOC Emissions from A-Line
360 units/hour * 5.0 lbs of foam/unit * 6% Blowing Agent/100 * 5% VOC Release Rate/100 * 1 ton/2,000 lbs * 8,760 hour/year= 23.65 tons of VOC/yea

Actual VOC Emissions from A-Line
5.0 lbs of foam/unit * 6% Blowing Agent/100 * 5% VOC Release Rate/100 * 1 ton/2,000 lbs * (5,000,000 doors per year/3 productions line) = 12.50 tons of VOC/yea

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Particulate Emissions for Deflashing Station (DF-3)**

| Emission Unit ID | Capacity (KW) | Maximum Rated Capacity (BTU/hr) | | Diesel Industrial Engines Emission Factors (lbs/MMBTU) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 0.31 | 0.31 | 0.31 | 0.29 | 4.41 | 0.36 | 0.95 |
| | | | | Potential Emissions (TPY) | | | | | |
| | | | PM | PM-10 | PM-2.5 | SOx | NOx | VOC | CO |
| EG - 1 | 50 | 170,650 | 0.013 | 0.013 | 0.013 | 0.012 | 0.188 | 0.015 | 0.041 |
| | | **Total** | 0.013 | 0.013 | 0.013 | 0.012 | 0.188 | 0.015 | 0.041 |

| Emission Unit ID | Capacity (KW) | Maximum Rated Capacity (BTU/hr) | iesel Industrial Engines Emission Factors (lbs/MMBTU) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 0.31 | 0.31 | 0.31 | 0.29 | 4.41 | 0.36 | 0.95 |
| | | | Potential Emissions (TPY) | | | | | | |
| | | | PM | PM-10 | PM-2.5 | SOx | NOx | VOC | CO |
| EG - 2 | 350 | 1,194,550 | 0.093 | 0.093 | 0.093 | 0.087 | 1.317 | 0.108 | 0.284 |
| | | **Total** | 0.093 | 0.093 | 0.093 | 0.087 | 1.317 | 0.108 | 0.284 |
| | | Grand Total | 0.106 | 0.106 | 0.106 | 0.099 | 1.505 | 0.123 | 0.324 |

**Notes:**

Per EPA Memorandum (09/06/1995), potential emissions were calculated based on 500 hours of operation per year since the generators are used solely to provide backup powe
Emission factors from EPA publication AP-42, Fifth edition (10/96 revision), Table 3.3-1

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Natural Gas Combustion Only**

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 82.99 | 727 |

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM* | PM10* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.90 | 7.60 | 0.600 | 100<br>**see below | 5.50 | 84.0 |
| Potential Emission in tons/yr | 0.691 | 2.762 | 0.218 | 36.348 | 1.999 | 30.532 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

| | HAPs - Organics | | | | |
|---|---|---|---|---|---|
| | Benzene | Dichlorobenzene | Formaldehyde | Hexane | Toluene |
| Emission Factor in lb/MMcf | 0.00210 | 0.00120 | 0.07500 | 1.80000 | 0.00340 |
| Potential Emission in tons/yr | 0.000763 | 0.000436 | 0.027261 | 0.654262 | 0.001236 |

| | HAPs - Metals | | | | | |
|---|---|---|---|---|---|---|
| | Lead | Cadmium | Chromium | Manganese | Nickel | |
| Emission Factor in lb/MMcf | 0.0005 | 0.0011 | 0.0014 | 0.0004 | 0.0021 | **Total** |
| Potential Emission in tons/yr | 0.00018 | 0.00040 | 0.00051 | 0.00014 | 0.00076 | **0.686** |

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Methodology**

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

**Complete List of Natural Gas Combustion Units**

| QTY | Location | Unit Type | MFG | BTU / HR - Each Unit | Model Number | Serial Number | MMBTU / HR | TOTAL MMBTU / HR |
|---|---|---|---|---|---|---|---|---|
| 1 | MRO Room | Air Handler | Arcoaire | 125,000 | GUF125A020AIN | R884400003 | 0.125 | 0.125 |
| 1 | MRO Room | Air Handler | Arcoaire | 50,000 | GUF050A008AIN | R884400197 | 0.05 | 0.05 |
| 1 | MRO Room | Air Handler | Arcoaire | 125,000 | FUG125A020AIN | R884400002 | 0.125 | 0.125 |
| 1 | MRO Room | Air Handler | Trane | 120,000 | TUY120R9U5W1 | 2495YTE7G | 0.12 | 0.12 |
| 1 | MRO Room | Air Handler | Trane | 80,000 | TUY080R9U3W0 | 22958R97G | 0.08 | 0.08 |
| 1 | MRO Room | Air Handler | Arcoaire | 200,000 | GUF200A032GIN | R884200064 | 0.2 | 0.2 |
| 1 | MRO Room | Water Heater | Vanguard | 38,000 | 5AU69 | VGLN0108418481 | 0.038 | 0.038 |
| 1 | ETC Room | Air Handler | Trane | 120,000 | TUS120B960A0 | E24617662 | 0.12 | 0.12 |
| 1 | ETC Room | Air Handler | Trane | 160,000 | TUS160B960A0 | E30632258 | 0.16 | 0.16 |
| 1 | ETC Room | Air Handler | Trane | 160,000 | TUS160B960A0 | E30632448 | 0.16 | 0.16 |
| 1 | ETC Room | Air Handler | Trane | 120,000 | TUS120B960A0 | E24617719 | 0.12 | 0.12 |
| 1 | ETC Room | Air Handler | Trane | 160,000 | TUS160B960A0 | E36032441 | 0.16 | 0.16 |
| 1 | ETC Room | Air Handler | Trane | 160,000 | TUS160B960A0 | E30632254 | 0.16 | 0.16 |
| 1 | ETC Room | Air Handler | Bryant | 132,000 | 316AA0066135ADJA | 3608A16965 | 0.132 | 0.132 |
| 1 | Door Break Room | Air Handler | Arcoaire | 125,000 | GUF125A020AIN | R884300088 | 0.125 | 0.125 |
| 1 | Molding Break Room | Water Heater | A.O. Smith | 75,000 | | | 0.075 | 0.075 |
| 1 | Molding Break Room | Duct Furnace | Reznor | 200,000 | EED4200-6 | AYG6632N10964 | 0.2 | 0.2 |
| 1 | Top Molding Office | Furnace | Bryant | 80,000 | 340MAU0480801 | 3101A10578 | 0.08 | 0.08 |
| 1 | BDL | BDL Flame Treater | ThermaTru | 600,000 | | | 0.6 | 0.6 |
| 1 | CDL | CDL Flame Treater | ThermaTru | 600,000 | | | 0.6 | 0.6 |
| 1 | Door Plant Restroom | Water Heater | Vanguard | 40,000 | 3BE21 | 0603143832 | 0.04 | 0.04 |
| 1 | Door Plant Restroom | Furnace | Dayton | 100,000 | 10EAMER | E450302F369701670 | 0.1 | 0.1 |
| 1 | PHPF | Water Heater | Vanguard | 36,000 | 310A60 | VGLN0804401983 | 0.036 | 0.036 |
| 1 | PHPF Loading Dock | Furnace | | 179,000 | QUDF-110-HRS | 00-78226 | 0.179 | 0.179 |
| 1 | ADL Paint Line | ADL Paint Booth | Eclipse | 2,000,000 | 200RM-S | 93-3218 | 2 | 2 |
| 1 | Split System Condensor/Air Handler | Outside Office | Arcoaire | 125,000 | | | 0.125 | 0.125 |
| 9 | Gas Fired Air Make Up Units | Roof Main Plant | Banaza | 750,000 | B2000 | | 0.75 | 6.75 |
| 4 | Gas Fired Air Make Up Units | Roof Main Plant | Applied Air | 529,000 | DFC115HRB HVM-A | | 0.529 | 2.116 |
| 2 | Gas Fired Air Make Up Units | Roof Main Plant | Sterling | 750,000 | QVDFW118HRB | | 0.75 | 1.5 |
| 2 | Gas Fired Air Make Up Units | Roof Main Plant | Sterling | 550,000 | QVDFW112HRB | | 0.55 | 1.1 |
| 2 | Gas Fired Air Make Up Units | ADL | Applied Air | 9,625,000 | | | 9.625 | 19.25 |
| 2 | Gas Fired Air Make Up Units | PHPF | Applied Air | 9,625,000 | | | 9.625 | 19.25 |
| 1 | Rooftop Package Unit | Roof | Trane | 600,000 | YCD360A4HE1AZEC1000 | C99L23799M | 0.6 | 0.6 |
| 1 | Rooftop Package Unit | Roof | Trane | 600,000 | YCD360A4HE1AZEC1000 | C99L23798M | 0.6 | 0.6 |
| 1 | Rooftop Package Unit | Roof | Trane | 600,000 | YCD360A4HE1AZEC1000 | C99L23797M | 0.6 | 0.6 |
| 1 | Rooftop Package Unit | Roof | Trane | 400,000 | YCD300B4HAFB | P46101498D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | 400,000 | YCD300B4HAFB | P46101569D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | 400,000 | YCD300B4HAFB | P45104277D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | 400,000 | YCD300B4HAFB | P50100621D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | 400,000 | YCD300B4HAFB | P45104236D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | 400,000 | YCD300B4HAFB | P45104263D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | assume 400,000 | YCD240BY14AFB | P46102402D | 0.4 | 0.4 |
| 1 | Rooftop Package Unit | Roof | Trane | 205,000 | YCD090C4HABE | P48100057D | 0.205 | 0.205 |
| 1 | Rooftop Package Unit | Roof | Trane | 205,000 | YCD090C4HABE | P49101677D | 0.205 | 0.205 |
| 2 | Makeup Air Units | Plant East Side | Applied Air | 9,625,000 | | | 9.625 | 19.25 |
| 1 | Makeup Air Units | Roof | Absolute Air | 600,000 | | | 0.6 | 0.6 |
| 1 | Makeup Air Units | Roof | McQuay | 1,000,000 | RPS020BA | 30G0012013 | 1 | 1 |
| 1 | Makeup Air Units | Roof | Brasch | assume 1,000,000 | | | 1 | 1 |
| 1 | curing oven, identified as D2-OV2 | | | | | | 0.25 | 0.25 |
| | | | | | | **GRAND TOTAL** | | **82.986** |

Company Name: Therma Tru Corporation
Address City IN Zip: 108 Mutzfield Road, Butler, Indiana 46721
Permit Renewal No: T033-30711-00019
Reviewer: Mehul Sura
Date: 10/21/2011

Natural Gas Combustion

| | Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr | |
|---|---|---|---|
| Natural Gas Combustion Only | 82.986 | | |
| FCO-2 and SCO-2 | 2.249 | | |
| Total | 85.2 | 746.7 | 1610 |

| | Greenhouse Gas | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/MMcf | 120,000 | 2.3 | 2.2 |
| Potential Emission in tons/yr | 44,800 | 1 | 1 |
| Summed Potential Emissions in tons/yr | 44,801 | | |
| CO2e Total in tons/yr | 45,072 | | |

**Methodology**
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission
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

Diesel Engines

| | EG - 1 | EG - 2 | Total |
|---|---|---|---|
| Output Horsepower Rating (hp) | 67.05 | 469.4 | 536.5 |
| Maximum Hours Operated per Year | 8760 | 8760 | 8760 |
| Potential Throughput (hp-hr/yr) | 587,358 | 4,111,944 | 4,699,302 |

**Green House Gas Emissions (GHG)**

| | Pollutant | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/hp-hr | 1.15E+00 | 4.63E-05 | 9.26E-06 |
| Potential Emission in tons/yr | 2.70E+03 | 1.09E-01 | 2.18E-02 |

| | | |
|---|---|---|
| **Summed Potential Emissions in tons/yr** | **2.70E+03** | |
| **CO2e Total in tons/yr** | **2.71E+03** | 2.71E+03 |
| | Total CO2e Total in tons/yr | 2,711 |
| | | 47,783 |

**Methodology**
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Natural Gas Combustion
Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).
Diesel Engines
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**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: February 3, 2012

RE: Themra Tru Corporation / 033-30711-00019

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

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

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

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

**Please Note:** *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

# 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: Rick Goodman
Therma Tru Corporation
601 RE Jones Road
Butler, IN 46721

DATE: February 3, 2012

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

SUBJECT: Final Decision
Part 70 Operating Permit Renewal
033-30711-00019

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:
Mike Daman – Plant Manager
David Jordan – Environmental Resources management (ERM)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

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

*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**

February 3, 2012

TO: Butler Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Therma Tru Corp**
**Permit Number: 033-30711-00019**

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 | GHOTOPP 2/3/2012<br>Therma-Tru Corp. - Butler 033-30711-00019 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** | |

| Line | Article Number | Name, Address, Street and Post Office Address | Postage | Handing Charges | Act. Value (If Registered) | Insured Value | Due Send if COD | R.R. Fee | S.D. Fee | S.H. Fee | Rest. Del. Fee<br>Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Rick Goodman Therma-Tru Corp. - Butler 601 RE Jones Rd Butler IN 46721 (Source CAATS) via confirmed delivery | | | | | | | | | |
| 2 | | Mike Daman Plant Mgr Therma-Tru Corp. - Butler 601 RE Jones Rd Butler IN 46721 *(RO CAATS)* | | | | | | | | | |
| 3 | | Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 *(Affected Party)* | | | | | | | | | |
| 4 | | DeKalb County Commissioners 100 South Main Street Auburn IN 46706 *(Local Official)* | | | | | | | | | |
| 5 | | Ms. Diane Leroy 303 N. Jackson St. Auburn IN 46706 *(Affected Party)* | | | | | | | | | |
| 6 | | Mr. Barry Fordanish R#3 1480 CR 66 Auburn IN 46706 *(Affected Party)* | | | | | | | | | |
| 7 | | Mr. Dave Weilbaker 1423 Urban Ave Auburn IN 46706 *(Affected Party)* | | | | | | | | | |
| 8 | | Dekalb County Health Department 220 E 7th St #110 Auburn IN 46706 *(Health Department)* | | | | | | | | | |
| 9 | | Butler Public Library 340 South Broadway Street Butler IN 46721-1308 *(Library)* | | | | | | | | | |
| 10 | | Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 *(Affected Party)* | | | | | | | | | |
| 11 | | Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 *(Affected Party)* | | | | | | | | | |
| 12 | | Brown & Sons Fuel Co. P.O. Box 665 Kendallville IN 46755 *(Affected Party)* | | | | | | | | | |
| 13 | | David Jordan Environmental Resources Management (ERM) 11350 North Meridian, Suite 320 Carmel IN 46032 (Consultant) | | | | | | | | | |
| 14 | | Mr. Marty K. McCurdy 2550 County Road 27 Waterloo IN 46793 *(Affected Party)* | | | | | | | | | |
| 15 | | Butler City Council and Mayors Office 201 S. Broadway Butler IN 47621 *(Local Official)* | | | | | | | | | |

| Total number of pieces Listed by Sender | Total number of Pieces Received at Post Office | Postmaster, Per (Name of Receiving employee) | The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels. |
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FACSIMILIE OF PS Form 3877

# Mail Code 61-53

| IDEM Staff | GHOTOPP 2/3/2012<br>Therma-Tru Corp. - Butler 033-30711-00019 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** | |

| Line | Article Number | Name, Address, Street and Post Office Address | Postage | Handing Charges | Act. Value (If Registered) | Insured Value | Due Send if COD | R.R. Fee | S.D. Fee | S.H. Fee | Rest. Del. Fee<br>Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party) | | | | | | | | | |
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